

## Tri-Party Agreement Milestone Review – Office of River Protection

May 21, 2002

## Meeting Minutes

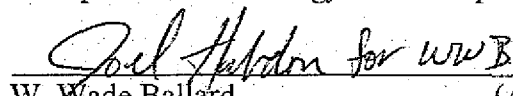
Approval:

Michael A. Wilson (B5-18)  
Chairperson and Ecology IAMIT Representative

Date:

8/5/02

Approval:

W. Wade Ballard (A5-12)  
RL IAMIT Representative

Date:

8/5/02

Approval:

Jim E. Rasmussen (H6-60)  
ORP IAMIT Representative

Date:

8/27/02

Approval:




Acting EPA IAMIT Representative (B5-01)

Date:

8/5/02

Minutes Prepared by:

Approval:

Eileen J. Murphy-Fitch (A1-14)  
Fluor Hanford, Inc.

Date:

8/5/02

|                  |         |        |                                     |           |        |
|------------------|---------|--------|-------------------------------------|-----------|--------|
| Aromi, E. S.     | CHG     | H6-63  | Mattlin, E.                         | RL        | A5-15* |
| Brown, M.        | Ecology | B5-18* | Miera, F. R.                        | CHG       | R1-31* |
| Bryson, D. E.    | ORP     | H6-60  | Morrison, R. D.                     | FH        | A1-14* |
| Burandt, M. E.   | ORP     | H6-60  | Murphy-Fitch, E. J.                 | FH        | A1-14* |
| Buxbaum, M.E.    | FH      | B3-53  | K. Niles                            | ODOE*     |        |
| Clark, C. E.     | RL      | A5-15* | Piippo, R. E.                       | FH        | A1-14  |
| Cruz, J.         | ORP     | H6-60  | Rasmussen, J. E.                    | ORP       | H6-60  |
| Cusack, L.       | Ecology | B5-18* | Riess, M. J.                        | CHG       | H9-03* |
| Dahl, S.         | Ecology | B5-18* | Russell, W.                         | ORP       | H6-60* |
| Defigh-Price, C. | CHG     | R2-58* | Singleton, D.                       | Ecology   | B5-18  |
| DeWitt, K.       | Ecology | B5-18  | Skinnarland, E. R.                  | Ecology   | B5-18  |
| Dixon, B. T.     | CHG     | R1-51  | Sobczyk, S.                         | Nez Perce |        |
| Gay, R.          | CTUIR   |        | Stanley, R.                         | Ecology   | Lacey* |
| Hales, J. E.     | FH      | A1-14  | Taylor, W.                          | ORP       | H6-60* |
| Hebdon, J.       | RL      | A5-12* | Umek, A. M.                         | FH        | B4-53* |
| Hedges, J.       | Ecology | B5-18* | Williams, D. J.                     | ORP       | H6-60* |
| Henry, D.        | ODOE*   |        | Yasek, R.                           | ORP       | H6-60  |
| Hertzel, J. S.   | FH      | A1-14  | Yerxa, J. K.                        | RL        | A5-15  |
| Irby, D.         | ORP     | H6-60* | Administrative Record               | EDMC      | H6-03* |
| Iwatate, D. F.   | FH      | A1-14* | File: TPAM_05_02.doc *w/Attachments |           |        |
| Jim, Y.          | YIN     |        |                                     |           |        |
| Jarayssi, M. N.  | CHG     | S7-20* |                                     |           |        |
| Keggen, D.       | Ecology | B5-18* |                                     |           |        |
| Lober, R.        | ORP     | H6-60  |                                     |           |        |
| Liou W.          | ORP     | H6-60  |                                     |           |        |

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ORP TRI-PARTY AGREEMENT  
QUARTERLY MILESTONE REVIEW

May 21, 2002  
712 Swift Blvd. Suite 5  
9:00 a.m. - 12:30 p.m.

| NAME                   | ORG                | MSIN  | PHONE          | MINUTES?<br>Yes/No |
|------------------------|--------------------|-------|----------------|--------------------|
| Kevin Dwyer            | Ecology            |       | 736-3020       | No                 |
| Doug Houston           | Organic Pesticides |       | (503) 278-4456 | yes                |
| Craig Cameron          | EPA                |       | 376-8665       | yes                |
| Jim Navarro            | ORP                |       | 373-4365       | N                  |
| HAROLD J. STAFFORD JR. | ORP                |       | 376-6597       | YES                |
| Ellen Mattlin          | DOE-RL             | A5-15 | 376-2385       | yes                |
| Joshua Dinnar          | FH                 |       |                | No                 |
| JEFF HERTZEL           | FH                 |       | 373-2616       | NO                 |
| Jeff Lyon              | ECY                |       | 376-3094       | yes                |
| Woody Russell          | ORP                |       | 373-5237       | Yes                |
| Suzanne Dahl           | Ecology            |       | 736-5705       | yes                |
| Jim Rasmussen          | ORP                |       | 376-2247       | yes                |
| MIKE WILSON            | ECOLOGY            |       | 736-3090       | yes                |
| Andy Stevens           | ORP                |       | 376-8235       | No                 |
| Jackie Hansen          | ORP                |       | 376-8511       | yes                |
| Mary Burandt           | ORP                |       | 373-9160       | Yes                |
| Joel Heddon            | RL-RCA             |       | 372-2400       | Yes                |
| Michael J. Roysch      | DOE ORP            |       | 376-4420       | yes                |
| Felix R. Miera         | CHG                |       | 376-7034       | Yes                |
| John Price             | ECY                |       | 736-3029       | NO                 |
| Cathy Louie            | ORP                |       | 376-6834       | yes                |
| Laure Barber           | EPA                |       | 736-5704       | yes                |
| Deborah Singleton      | Ecology            |       | 736-5722       | yes                |
| Brenda K. Jantzen      | Ecology            |       | 736-5707       | yes                |
| Bob Loba               | ORP                |       | 373-7949       | no                 |
| Wendy Han              | ORP                |       | 373-9879       | yes                |
| VIC CALLEJON           | ORP                |       | 373-9880       | yes                |
| Mark Ramsey            | ORP                |       | 376-7924       | No                 |
| Ralph Wilson           | CHG                |       |                |                    |
| Phil LaMant            |                    |       |                |                    |
|                        |                    |       |                |                    |
|                        |                    |       |                |                    |
|                        |                    |       |                |                    |

Office of River Protection Tri-Party Agreement Milestone Review  
May 21, 2002

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**OFFICE OF RIVER PROTECTION (ORP) STATUS**

FY 2002 ORP Tri-Party Agreement Milestone Performance

No significant issues/concerns resulting in follow-on action were identified during the presentation. Presentation attached.

Critical path data will be provided under separate cover to the agencies.

M-23, Tank Integrity and Monitoring

No significant issue/concerns resulting in follow-on action were identified during the presentation. Presentation attached.

Interim Stabilization (Consent Decree)

No significant issue/concerns resulting in follow-on action were identified during the presentation. Presentation attached.

M-44-00, Tank Waste Characterization

Corrections noted:

Page 14, under the Grab Sample, there was a reference to AN-117 but should be AN-107.  
Page 18, the reference should be AZ-102 (not AZ-101),

The need for negotiation of additional work plans remains an issue for the parties. Discussions continue.

No significant issue/concerns resulting in follow-on action were identified during the presentation. Presentation attached.

M-45-11, Complete 2442-AR Vault Interim Status Actions

No significant issues/concerns resulting in follow-on action were identified during the presentation. Presentation is attached.

M-48-00 DST Integrity Assessment Program

No significant issue/concerns resulting in follow-on action were identified during the presentation. Presentation attached.

M-46-00, DST Space Evaluation Status Actions

No significant issue/concerns resulting in follow-on action were identified during the presentation. Presentation attached.

M-47-00, Tank Waste Treatment, Storage and Disposal Facilities

No significant issue/concerns resulting in follow-on action were identified during the presentation. Presentation attached.

M-45-00, SST Closure

No significant issue/concerns resulting in follow-on action were identified during the presentation. Presentation attached.

M-45-50, 60 SST Corrective Action

No significant issues/concerns resulting in follow-on action were identified during the presentation. Presentation attached.

M-43-00, Tank Farm Upgrades

No significant issues/concerns resulting in follow-on action were identified during the presentation. Presentation attached.

M-62, Complete Pretreatment Processing and Vitrification of Tank Wastes

No significant issues/concerns resulting in follow-on action were identified during the presentation. Presentation attached.

M-92-05, Inclusion of Hanford Site Cs/Sr Treatment and/or Repackaging Parameters in DOE TWRS Phase II Request for Proposals

No significant issues/concerns resulting in follow-on action were identified during the presentation. Presentation attached.

M-90-00, Completion Acquisition of Facilities for Interim Storage of IHLW and Storage/Disposal of ILAW and M-20 Part B Permits

No significant issues/concerns resulting in follow-on action were identified during the presentation. Presentation attached.

Correction: Page 40, IHLW not be completed as reported in the presentation

Office of River Protection

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# Tri-Party Agreement Quarterly Milestone Review



U.S. Department of Energy  
U.S. Environmental Protection Agency  
Washington State Department of Ecology

May 21, 2002

**Agenda**

Office of River Protection Tri-Party Agreement

Quarterly Milestone Review

May 21, 2002

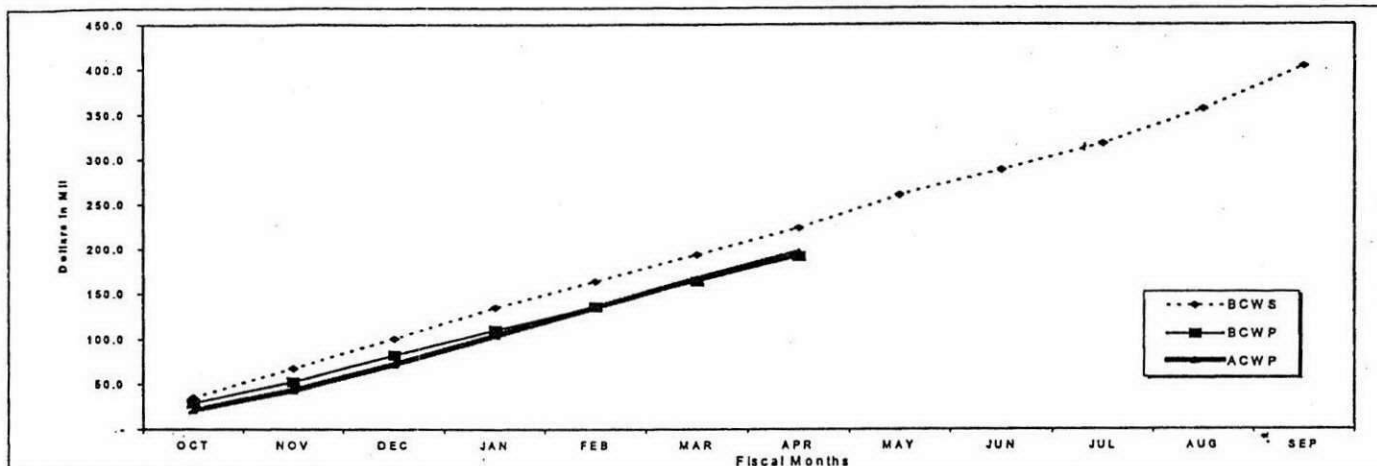
712 Swift Blvd. Suite 5

9:00 a.m. – 12:30 p.m.

| Topic  | Leads  | Time  |
|--|--|-------|
| • FY 2002 ORP Tri-Party Agreement Cost & Schedule Performance and TPA Milestone Statistics                                       | Jim Rasmussen/Mary Beth Burandt/<br>Suzanne Dahl/Jeff Lyon | 9:00  |
| • ORP Critical Path Related to Sections 4.1 and 11.8   | Jim Rasmussen/Mary Beth Burandt/<br>Peter Furlong          | 9:10  |
| • M-23, Tank Integrity and Monitoring  | Jim Rasmussen/Mary Beth Burandt/<br>Jeff Lyon              | 9:20  |
| • Interim Stabilization (Consent Decree)   | Dana Bryson/Andy Stevens/Kevin Dewitt                      | 9:30  |
| • M-44-00, Tank Waste Characterization   | Delmar Noyes/Wen-Shou Liou/Debra Singleton                 | 9:45  |
| • M-45-11, Complete 244-AR Vault Interim Status Actions  | Delmar Noyes/Harold Stafford/Jeff Lyon                     | 10:00 |
| • DST Integrity Assessment Program   | Delmar Noyes/Vic Callahan/Jeff Lyon                        | 10:10 |
| • M-46-00, Double-Shell Tank Space Evaluation  | Dana Bryson/Joe Cruz/Jeff Lyon                             | 10:20 |
| • M-47-00, Tank Waste Treatment, Storage and Disposal Facilities   | Kay Fick/Joe Cruz/Dick Heggen                              | 10:30 |
| • M-45-00, Single-Shell Tank Closure   | Kay Fick/Bob Lober/Dick Heggen                             | 10:40 |
| • M-45-50, 60 Single-Shell Tank Corrective Action  | Kay Fick/Rob Yasek/Joe Caggiano                            | 10:55 |
| • M-43-00, Tank Farm Upgrades  | Bill Taylor/Bobby Williams/Stephen Lijek                   | 11:10 |
| • M-62, Complete Pretreatment Processing and Vitrification of Tank Wastes  | Bill Taylor/Mark Ramsay/Suzanne Dahl                       | 11:20 |
| • M-92-05, Inclusion of Hanford Site Cs/Sr Treatment and/or Repackaging Parameters in DOE TWRS Phase II Request for Proposals    | Bill Taylor/Mark Ramsay/Suzanne Dahl/Jeff Lyon             | 11:35 |
| • M-90-00, Complete Acquisition of Facilities for Interim Storage of IHLW and Storage/ Disposal of ILAW and M-20, Part B Permits | Bill Taylor/Phil LaMont/Suzanne Dahl                       | 11:40 |
| • Review of new commitments and actions  | Jim Rasmussen/Mary Beth Burandt/<br>Suzanne Dahl/Jeff Lyon | 11:55 |

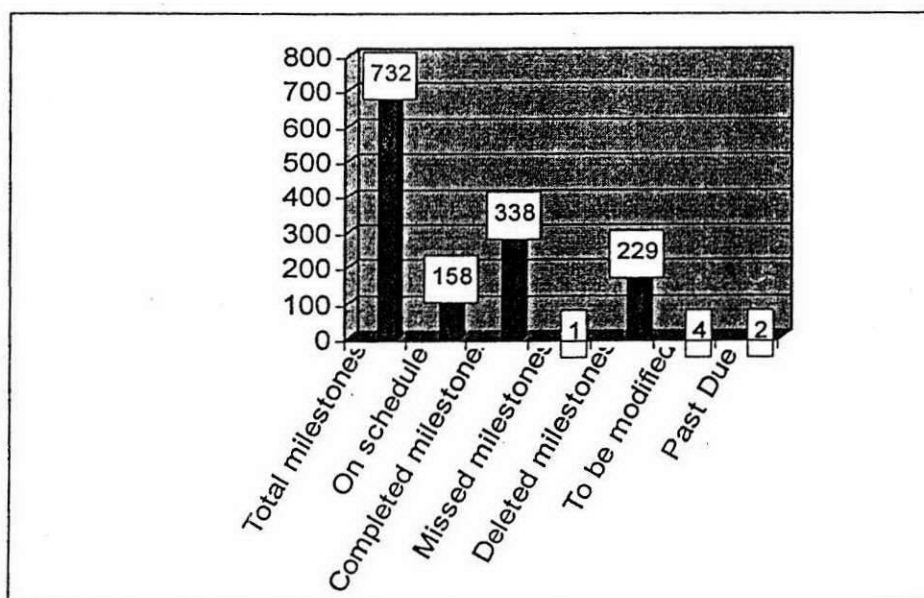
# Cost/Schedule Performance

CH2M HILL HANFORD GROUP, INC.  
FY 2002 - ALL DIRECT FUNDED ACTIVITIES (CHG/ORP/PNNL)



|  | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY   | JUN   | JUL   | AUG   | SEP   |
|--|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| FY02 CURRENT APPROVED PERFORMANCE MEASUREMENT BASELINE |        |        |        |        |        |        |        |       |       |       |       |       |
| CURRENT PERIOD   |        |        |        |        |        |        |        |       |       |       |       |       |
| BCWS   | 35.0   | 32.6   | 33.1   | 34.2   | 28.9   | 30.3   | 29.6   | 36.7  | 28.3  | 29.2  | 38.1  | 47.6  |
| BCWP   | 28.8   | 24.0   | 29.5   | 28.0   | 25.5   | 28.5   | 27.8   |       |       |       |       |       |
| ACWP   | 21.4   | 21.8   | 29.0   | 32.1   | 30.6   | 32.1   | 29.7   |       |       |       |       |       |
| CUMULATIVE YEAR TO DATE                                |        |        |        |        |        |        |        |       |       |       |       |       |
| BCWS   | 35.0   | 67.6   | 100.7  | 134.9  | 163.8  | 194.1  | 223.7  | 260.4 | 288.7 | 317.9 | 356.0 | 403.6 |
| BCWP   | 28.8   | 52.8   | 82.3   | 110.3  | 135.8  | 164.3  | 192.1  |       |       |       |       |       |
| ACWP   | 21.4   | 43.2   | 72.2   | 104.3  | 134.9  | 167.0  | 196.7  |       |       |       |       |       |
| SV %   | -17.5% | -21.7% | -18.3% | -18.2% | -17.1% | -15.3% | -14.2% |       |       |       |       |       |
| CV %   | 25.7%  | 18.2%  | 12.3%  | 5.4%   | 0.7%   | -1.6%  | -2.9%  |       |       |       |       |       |

## Total ORP TPA Statistics



This milestone count is based on all TPA milestones associated with ORP since the creation of the TPA in 1989

### TPA Milestone Statistics

(Including target milestones)

| Milestone   | Due Date                | Total<br>Active as<br>of 4/02/02 | Milestone<br>Number   | Due Date  | Milestone<br>Number   | Due Date   |
|---|-------------------------|----------------------------------|---|---|---|--|
| M-20-00, Submit Part B Permit<br>Application on Closure/Post<br>Closure Plans for all RCRA TSD<br>Units | 2/28/2004<br>(M-20-00)  | 2                                | M-20-56   | 6/30/02<br>RP 6/30/03   | M-20-57   | 8/31/02<br>RP 6/30/03  |
| M-23-25, Tank Integrity and<br>Monitoring   | 9/30/2004<br>(M-23-25)  | 9                                | M-23-23<br>M-23-24<br>M-23-25B<br>M-23-23C  | 6/15/02<br>6/30/02<br>9/30/02<br>9/30/03  | M-23-25D<br>M-23-25E<br>M-23-25F<br>M-23-25<br>M-23-25G   | 9/30/03<br>9/30/03<br>3/31/04<br>9/30/04<br>9/30/04  |
| M-43-00, Complete Tank Farm<br>Upgrades   | 6/30/2005<br>(M-43-00)  | 2                                | M-43-16   | 6/30/03   | M-43-00   | 6/30/05  |
| M-44-0, Double and Single Shell<br>Tank Characterization  | 9/30/2002<br>(M-44-00A) | 3                                | M-44-00A<br>M-44-15F  | 9/30/02<br>9/30/02  | M-44-16F  | 9/30/02  |
| M-45-00, Complete Closure<br>of all SST Farms   | 9/30/2024<br>(M-45-00)  | 70                               | M-45-02 (total<br>of 18<br>milestones)<br>M-45-06-T05<br>M-45-05-T16<br>M-45-55-T02<br>M-45-05D<br>M-45-03D<br>M-45-55-T03<br>M-45-11<br>M-45-00C<br>M-45-55<br>M-45-05B<br>M-45-05-T17<br>M-45-03G<br>M-45-06-T06<br>M-45-03E<br>M-45-03H<br>M-45-03C<br>M-45-05C<br>M-45-05E<br>M-45-06-T07A<br>M-45-05A<br>M-45-03I<br>M-45-00B<br>M-45-05-T05<br>M-45-06-T07B | 9/30/01<br>& annually<br>thereafter<br>6/30/02<br>10/30/02<br>10/31/02<br>12/31/02<br>5/31/03<br>6/30/03<br>9/30/03<br>2/28/04<br>2/28/04<br>3/31/04<br>4/30/04<br>6/30/04<br>6/30/04<br>9/30/04<br>9/30/04<br>9/30/05<br>11/30/05<br>6/30/06<br>6/30/06<br>9/30/06<br>9/30/06<br>9/30/06<br>9/30/07<br>6/30/08 | M-45-05-T06<br>M-45-05-T07<br>M-45-06-T07C<br>M-45-05-T08<br>M-45-00D<br>M-45-05-T09<br>M-45-06-T03<br>M-45-06-T07D<br>M-45-05-T10<br>M-45-05-T11<br>M-45-06-T04<br>M-45-06-T07E<br>M-45-05-T12<br>M-45-05-T13<br>M-45-06-T07F<br>M-45-05-T14<br>M-45-05-T15<br>M-45-06-T07G<br>M-45-05<br>M-45-06-T07H<br>M-45-06-T07I<br>M-45-06-T07J<br>M-45-06<br>M-45-00<br>M-45-03F<br>M-45-06<br>M-45-05F<br>M-45-60 | 9/30/08<br>9/30/09<br>6/30/10<br>9/30/10<br>6/30/11<br>9/30/11<br>3/31/12<br>6/30/12<br>9/30/12<br>9/30/13<br>3/31/14<br>6/30/14<br>9/30/14<br>9/30/15<br>6/30/16<br>9/30/16<br>9/30/17<br>6/30/18<br>9/30/18<br>6/30/20<br>6/30/22<br>6/30/24<br>9/30/24<br>9/30/24<br>TBD<br>TBD<br>TBD<br>6 months<br>following<br>RFI report<br>approval |

TPA Milestone Statistics (continued)

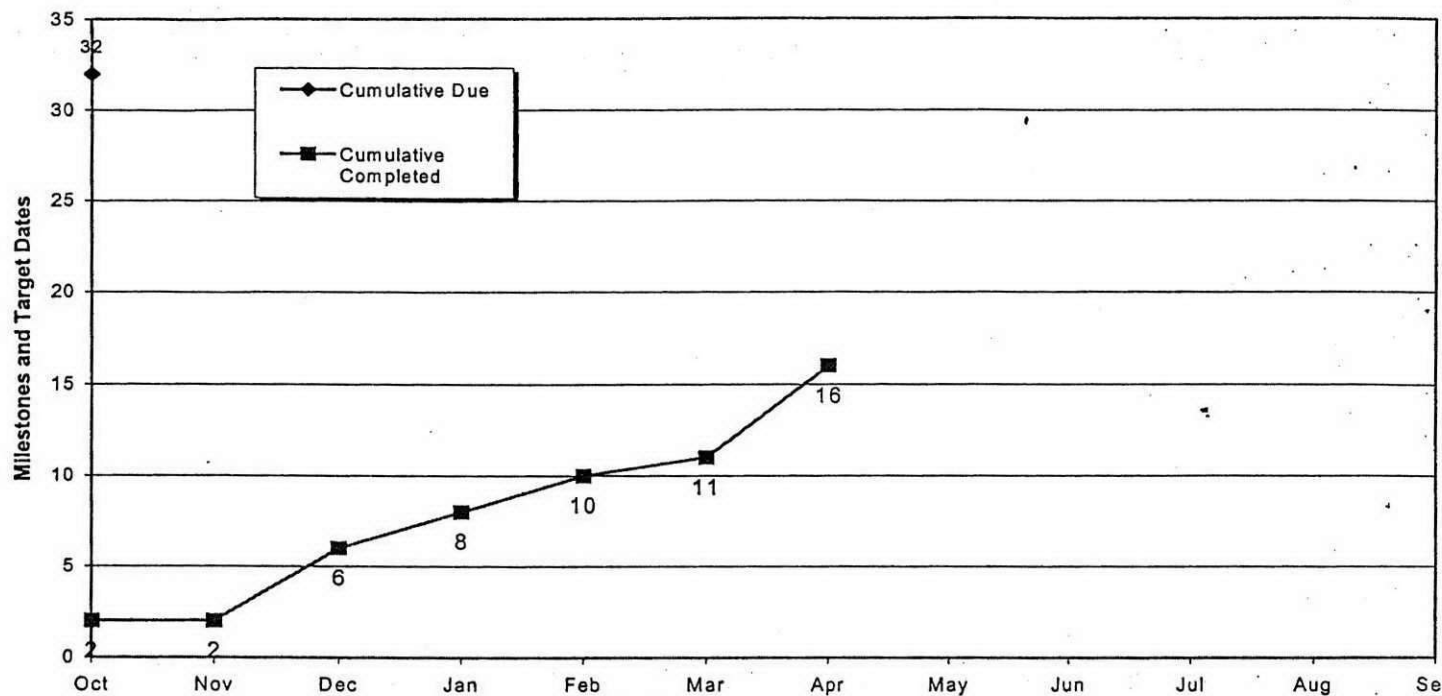


| Milestone   | Due Date              | Total Active as of 11/13/01                       | Milestone Number   | Due Date   | Milestone Number   | Due Date   |
|---|-----------------------|---|--|--|--|--|
| M-46-00, Double Shell Tank Space Evaluation   | 11/30/2006 (M-46-01M) | 10  | M-46-00I<br>M-46-01I<br>M-46-00J<br>M-46-01J<br>M-46-00K                                 | 9/30/02<br>11/30/02<br>9/30/03<br>11/30/03<br>9/30/04                                | M-46-01K<br>M-46-00L<br>M-46-01L<br>M-46-00M<br>M-46-01M                               | 11/30/04<br>9/30/05<br>11/30/05<br>9/30/06<br>11/30/06                                   |
| M-47-00, Complete All Work for Phase 1 Operations   | 2/28/2018 (M-47-00)   | 9   | M-47-05<br>M-47-03<br>M-47-01<br>M-47-05A<br>M-47-02                                     | 5/31/04<br>7/30/04<br>3/31/06<br>4/30/06<br>3/31/07                                  | M-47-00A<br>M-47-04<br>M-47-06<br>M-47-00  | 2/28/07<br>6/30/07<br>6/30/10<br>2/28/18   |
| M-50-00, Complete Pretreatment Processing of Hanford Tank Waste   | 12/31/2028 (M-50-00)  | 1   | M-50-00  | 9/30/24  |  |  |
| M-51-00, Complete Vitrification of Hanford High Level Tank Waste  | 12/31/2028 (M-51-00)  | 1   | M-51-00  | 12/31/28   |  |  |
| M-61-00* (alternate path), Complete Pretreatment & Immobilization of Hanford Low Activity Tank Waste                        | 12/31/2028 (M-61-00)  | 1   | M-61-00  | 12/31/28   |  |  |
| M-62-00, Complete Pretreatment Processing and Vitrification of Tank Wastes  | 12/31/2028 (M-62-00)  | 20 (M-62-07B is not counted until RP is approved) | M-62-01 (total of 10 milestones)<br>M-62-06<br>RP Date<br>M-62-07A<br>RP Date<br>M-62-08 | Semi-annually beginning 7/31/00<br>7/31/01<br>12/31/02<br>TBD<br>10/30/03<br>7/31/05 | M-62-07B<br>M-62-03<br>M-62-09<br>M-62-10<br>M-62-11<br>M-62-00A<br>M-62-00<br>M-62-12 | RP 10/30/05<br>12/31/06<br>12/31/07<br>12/31/09<br>1/31/14<br>2/28/18<br>12/31/28<br>TBD |
| M-90-00, Interim Storage and Disposal of LAW and Interim Storage of HLW   | TBD (M-90-00)         | 5   | M-90-09-T01<br>RP Date<br>M-90-08<br>RP Date   | 3/30/04<br>5/30/03<br>7/31/04<br>2/28/05   | M-90-10<br>RP Date<br>M-90-11<br>RP Date<br>M-90-00                                    | 1/31/07<br>8/31/08<br>2/1/07<br>6/30/09<br>TBD   |
| M-92-05, Inclusion of Hanford Site Cs/Sr treatment and/or repackaging parameters in DOE TWRS Phase II request for proposals | 6/30/2003 (M-92-05)   | 1   | M-92-05  | 6/30/03  |  |  |
| M-48-00, DST Integrity Program, Submit Results of 4 DSTs not Previously Examined  | 9/30/2007             | 7   | M-48-10<br>M-48-11<br>M-48-12  | 9/30/02<br>9/30/03<br>9/30/04  | N-48-13<br>M-48-14<br>M-48-15<br>M-48-00   | 9/30/05<br>3/31/06<br>9/30/07<br>9/30/07   |

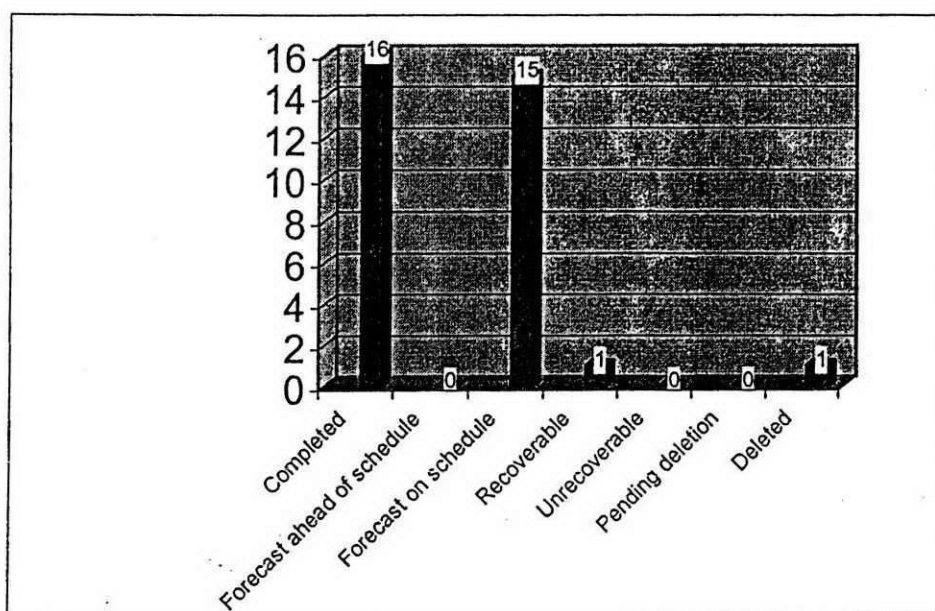
TPA Milestone Statistics (continued)

| Milestone                               | Due Date               | Total<br>Active as<br>of 11/13/01 | Milestone<br>Number | Due Date | Milestone<br>Number | Due Dat  |
|---|------------------------|-----------------------------------|---------------------|----------|---------------------|----------|
| Interim Stabilization Consent<br>Decree | 9/30/2004<br>(D001-01) | 19                                | D-001-00-R13        | 7/31/02  | D-001-00-R18        | 10/31/03 |
|   |                        |                                   | D-001-12V           | 9/30/02  | D-001-13-T01        | 9/30/03  |
|   |                        |                                   | D-001-00-R14        | 10/31/02 | D-001-00V           | 9/30/03  |
|   |                        |                                   | D-001-13            | 11/30/02 | D-001-06-T01        | 9/30/03  |
|   |                        |                                   | D-001-00-R15        | 1/31/03  | D-001-00-R19        | 1/31/04  |
|   |                        |                                   | D-001-08-T01        | 2/28/03  | D-001-00-R20        | 4/30/04  |
|   |                        |                                   | D-001-00-R16        | 4/30/03  | D-001-00-R21        | 7/31/04  |
|   |                        |                                   | D-001-09-T01        | 6/30/03  | D-001-01            | 9/30/04  |
|   |                        |                                   | D-001-00-R17        | 7/31/03  | D-001-00-R22        | 10/31/04 |
|   |                        |                                   | D-001-11-T01        | 8/30/03  |                     |          |
| Total Active Milestones:                |                        | 161                               |                     |          |                     |          |

### FY 2002 Milestone Plan



### FY 2002 MILESTONE PERFORMANCE



## Fiscal Year 2002 Tri-Party Agreement Milestone Status

| Milestone    | Description   | Due Date | Completed | Forecast          |             | Recoverable | Unrecoverable | Pending Deletion | Deleted |
|--------------|---|----------|-----------|-------------------|-------------|-------------|---------------|------------------|---------|
|              |   |          |           | Ahead of Schedule | On Schedule |             |               |                  |         |
| D-001-00-R10 | SUBMIT QUARTERLY REPORT FOR TANK STABILIZATION ACTIVITIES                                 | 10/31/01 | X         |                   |             |             |               |                  |         |
| M-23-21      | SUBMIT REVISED HAZARDOUS WASTE FACILITY APPLICATION FORM                                  | 10/31/01 | X         |                   |             |             |               |                  |         |
| D-001-11     | INITIATE PUMPING OF TANKS U-108, U-107, S-111, AND SX-102                                 | 12/30/01 | X         |                   |             |             |               |                  |         |
| M-045-03-T03 | SUBMIT S-112 FUNCTIONS AND REQUIREMENTS DOCUMENT  | 12/30/01 | X         |                   |             |             |               |                  |         |
| M-024-00M    | GROUNDWATER WELLS, UP TO 50/YEAR  | 12/30/01 | X         |                   |             |             |               |                  |         |
| M-045-03-T04 | SUBMIT C-104 FUNCTIONS AND REQUIREMENTS DOCUMENT  | 12/31/01 | X         |                   |             |             |               |                  |         |
| D-001-00-R11 | SUBMIT QUARTERLY REPORT FOR TANK STABILIZATION ACTIVITIES                                 | 1/31/02  | X         |                   |             |             |               |                  |         |
| M-062-01D    | SUBMIT SEMI-ANNUAL COMPLIANCE REPORT (*waved by submittal of recovery plan)               | 1/31/02  |           |                   |             |             |               |                  | X*      |
| M-045-55-T01 | SUBMIT SST WMA PHASE 1RFI/CMS FOR WMA S-SX  | 1/31/02  | X         |                   |             |             |               |                  |         |
| M-23-22-T01  | SUBMIT DOCUMENT IDENTIFICATION AND DESCRIPTION OF EXISTING SST IN-TANK S&M PROGRAM        | 2/28/02  | X         |                   |             |             |               |                  |         |
| M-045-12-T01 | SUBMIT AN OPTIONS REPORT (ACTIONS FOR INCREASE IN DST SPACE)                              | 2/28/02  | X         |                   |             |             |               |                  |         |
| M-046-01H    | CONCURRENCE OF ADDITIONAL TANK ACQUISITION  | 3/15/02  | X         |                   |             |             |               |                  |         |
| M-23-02-01   | SUBMIT SST SYSTEM LEAK DETECTION AND MONITORING F&R DOCUMENT                              | 6/15/02  |           |                   | X           |             |               |                  |         |
| M-23-25A     | COMPLETE THE INSTALLATION OF LIQUID OBSERVATION WELLS (LOWs) AND BEGIN LIQUID OBSERVATION | 3/31/02  | X         |                   |             |             |               |                  |         |
| M-043-15     | START CONSTRUCTION FOR UPGRADES IN THE FOURTH TANK FARM                                   | 3/31/02  | X         |                   |             |             |               |                  |         |
| D-001-04-T01 | COMPLETE PUMPING OF U-103, U-105, U-102 AND U-109   | 4/15/02  | X         |                   |             |             |               |                  |         |

| Milestone    | Description   | Due Date                     | Completed | Forecast          |             | Recoverable | Unrecoverable | Pending Deletion | Deleted |
|--------------|---|------------------------------|-----------|-------------------|-------------|-------------|---------------|------------------|---------|
|              |   |                              |           | Ahead of Schedule | On Schedule |             |               |                  |         |
| D-001-00-R12 | SUBMIT QUARTERLY REPORT FOR TANK STABILIZATION ACTIVITIES                                   | 4/30/02                      | X         |                   |             |             |               |                  |         |
| M-045-00C    | COMPLETE RENEGOTIATION OF 2 <sup>ND</sup> PHASE SST WASTE RETRIEVAL<br>*DISPUTE AT PM LEVEL | 5/31/02                      |           |                   | X*          |             |               |                  |         |
| M-026-01L    | SUBMIT ANNUAL HANFORD LAND DISPOSAL RESTRICTIONS REPORT                                     | 4/30/02                      | X         |                   |             |             |               |                  |         |
| M-23-24      | SUBMIT SST SYSTEM INTEGRITY ASSESSMENT REPORT   | 6/30/02                      |           |                   | X           |             |               |                  |         |
| M-045-06-T05 | SUBMIT TANK FARM CLOSURE /POST-CLOSURE WORKPLAN UPDATE                                      | 6/30/02                      |           |                   | X           |             |               |                  |         |
| M-020-56     | SUBMIT CANISTER STORE FACILITY PART B PERMIT  | 6/30/02<br>(RP date 6/30/03) |           |                   | X           |             |               |                  |         |
| D-001-00-R13 | SUBMIT QUARTERLY REPORT FOR TANK STABILIZATION ACTIVITIES                                   | 7/31/02                      |           |                   | X           |             |               |                  |         |
| M-062-01E    | SUBMIT SEMI-ANNUAL COMPLIANCE REPORT  | 7/31/02                      |           |                   | X           |             |               |                  |         |
| M-020-57     | SUBMIT ILAW FACILITY "CERTIFIED" PART B PERMIT  | 8/31/02<br>(RP date 6/30/03) |           |                   | X           |             |               |                  |         |
| D-001-12V    | PERCENTAGE OF PUMPABLE LIQUID REMAINING IS <18%   | 9/30/02                      |           |                   |             | X           |               |                  |         |
| M-044-00A    | COMPLETE DELIVERY OF INFORMATION REQUIREMENTS FOR WIRD                                      | 9/30/02                      |           |                   | X           |             |               |                  |         |
| M-044-15F    | COMPLETE CHARACTERIZATION DELIVERABLES  | 9/30/02                      |           |                   | X           |             |               |                  |         |
| M-044-16F    | COMPLETE INPUT OF CHARACTERIZATION INFORMATION INTO DATABASE                                | 9/30/02                      |           |                   | X           |             |               |                  |         |
| M-046-00I    | DOUBLE-SHELL TANK SPACE EVALUATION  | 9/30/02                      |           |                   | X           |             |               |                  |         |
| M-23-25B     | COMPLETE THE INSTALLATION OF LIQUID OBSERVATION WELLS (LOWS) AND BEGIN LIQUID OBSERVATION   | 9/30/02                      |           |                   | X           |             |               |                  |         |
| M-045-02K    | SUBMIT ANNUAL UPDATE TO SST RETRIEVAL SEQUENCE DOCUMENT.                                    | 9/30/02                      |           |                   | X           |             |               |                  |         |
| M-48-10      | SUBMIT RESULTS OF (4) DST'S NOT PREVIOUSLY EXAMINED   | 9/30/02                      |           |                   | X           |             |               |                  |         |
| TOTAL        |   |                              | 16        | 0                 | 15          | 1           | 0             | 0                | 1       |

**M-23, Tank Integrity and Monitoring****I. Near-Term Deliverables:**

- **M-23-21**, Submit Revised Hazardous Waste Facility Permit Application Form  
Due: 10/30/01  
Status: Complete
- **M-23-22-T01**, Submit Document Identification and Description of Existing SST In-tank S&M Program  
Due: 2/28/02  
Status: Complete, Meeting with Ecology discussing technical issues.
- **M-23-23**, Submit SST System Leak Detection and Monitoring F&R Document  
Due: 6/15/02  
Status: On schedule
- **M-23-25A**, Complete the Installation of Liquid Observation Wells (LOWs) and Begin Liquid Observation  
Due: 3/31/02  
Status: Complete
- **M-23-24**, Submit SST System Integrity Assessment Report  
Due: 6/30/02  
Status: On schedule. DOE has been working on determining the parts of the ancillary system which will be used and will not be used.
- **M-23-25B**, Complete the Installation of Liquid Observation Wells (LOWs) and Begin Liquid Observation  
Due: 9/30/02  
Status: On schedule. Developing field work packages.
- **M-23-25C**, Complete the Installation of Liquid Observation Wells (LOWs) and Begin Liquid Observation  
Due: 3/31/03  
Status: On Schedule
- **M-23-25D**, Complete the Installation of Liquid Observation Wells (LOWs) and Begin Liquid Observation  
Due: 9/30/03  
Status: On schedule
- **M-23-25E**, Procure Necessary Equipment to Support Additional LOW Monitoring Systems  
Due: 9/30/03  
Status: On schedule

- **M-23-25F**, Complete the Installation of Liquid Observation Wells (LOWs) and Begin Weekly Liquid Observation  
Due: 3/31/04  
Status: On schedule
- **M-23-25**, Complete the Installation of Liquid Observation Wells (LOWs)  
Due: 9/30/04  
Status: On schedule
- **M-23-25G**, Complete the Installation of Liquid Observation Wells (LOWs) and Begin Weekly Liquid Monitoring  
Due: 9/30/04  
Status: On schedule

**II. Significant Accomplishments:**

- DOE submitted description of the existing SST monitoring program – February 22, 2002.
- Four LOWs installed.
- RCRA Part A issues have been closed between DOE and Ecology.

**III. Significant Planned Actions in the Next Six Months:**

- Complete leak detection and monitoring F&R
- Complete structural integrity deliverable.
- Complete installation of LOWs.

**IV. Issues:**

- None

**Interim Stabilization Consent Decree****Near-Term Deliverables:**

- Reduce Total Liquids to 18% of Total Volume from SSTs (D-001-12V)  
Due: 9/30/02  
Status: On schedule, but at significant risk. It is being closely followed.
- Start Interim Stabilization of 5 SSTs - 241-U-111, 241-S-109, 241-S-112, 241-S-101, 241-S-107 (D-001-13)  
Due: 11/30/02  
Status: On schedule
- Reduce Total Liquids to 2% of Total Volume from SSTs (D-001-00V)  
Due: 9/30/03  
Status: On schedule
- Complete Interim Stabilization of all 29 SSTs (D-001-00)  
Due: 9/30/04  
Status: On schedule

**Status:**

- Eleven (11) tanks are in pumping status. Pumping availability is down due to instrumentation and other maintenance issues as well as the failed hose-in-hose transfer line, pump failure in a receiver tank and a partially plugged transfer line.
- Tank SX-105 is being evaluated for stabilization criteria by the Contractor.
- 1.9 million gallons have been removed.
- 400,000 gallons were pumped the past quarter.
- The partially plugged transfer line from U-Farm was partially opened by reverse flushing.
- Planning for pumping tank C-103 is in progress.



**Issues/Recovery:**

- Restart of remaining 8 pumps, and continued operation, must be on schedule in order to meet the September 30, 2002 milestone.
- The Hose-in-Hose leak and partially plugged U Farm transfer line issues must be resolved.

**Planned Actions:**

- Complete the stabilization evaluation for tank SX-105.
- Reactivate a direct buried line in SX Farm in the short term, and replace the HIHTL to complete pumping.
- Resume pumping from the U-Farm. It will be limited at first to evaluate amount of clearing.
- Resolve maintenance issues and resume pumping of the 11 tanks.

**Issues:**

- February 2002 Recovery Plan is being reevaluated to determine if 9/30/02 commitment is still achievable. Limited project float for this commitment remains in the schedule.

**Milestone M-44-00A, Complete delivery of information requirements as identified in the annually submitted Waste Information Requirements Document (WIRD).**

**I. Deliverables:**

- **M-44-15F:** Complete Characterization Deliverables Consistent with TSB-WIRD Developed for FY 2002.  
Due: 9/30/02  
Status: On Schedule
- **M-44-16F:** Complete Input of Characterization Information for HLW Tanks for which Sampling and Analysis was Completed Per the FY 2002 TSB-WIRD, Into Electronic Database.  
Due: 9/30/02  
Status: On Schedule
- **Work Schedule/Baseline Management –** The Correlation between individual TPA milestones and RPP baseline will be addressed upon completion of the fully integrated RPP baseline.

**II. Significant Accomplishments:**

- Completed core samples from Tanks 241-AY-101 AND 241-AY-102.
- Completed grab samples from Tanks 241-AP-108, 241- AN-107, and 241-SY-102.

**Sampling status as of 05/7/02**

|      | Sample<br>Scheduled                                | Sample<br>Completed                      | MYWP FY 02<br>Sampling Baseline |
|------|--|--|---------------------------------|
| Core | 4 (AN-105 , AP-105, AY-101, AY-102)                | 2 (AN-105, AP-105, AY-101, AY-102)       | 6                               |
| Grab | 6 (C-103, AP-102, AP-108, SY-102, AN-101, AN-102 ) | 5 (C-103, AP-102, AP-108, SY-102,AN-117) | 11                              |

- Completed five Tank Characterization Reports for the current FY.
- Completed and submitted FY2002 Second Quarterly TSB-WIRD Status Report to Ecology and EPA on 4/23/02.
- A characterization sampling priorities workshop was held on 3/13/02. Issues and data needs for FY 2003 were identified and prioritized. The final document for planned FY 2003 characterization sampling will be published by the end of this fiscal year.

**III. Significant Planned Actions within the Next Six Months:**

- Issue FY 2002 Third Quarterly TSB-WIRD Status Report by 07/31/02.
- Complete TPA Milestone M-44-15F and M-44-16F by 9/30/02.
- Issue FY 2002 Fourth/Annual TSB-WIRD Status Report by 10/31/02.

**IV. Issues:**

- Discussions on M-44 completion date of September 30, 2002 are to be scheduled in response to Ecology's letter requesting additional milestones. DOE has submitted a draft response to Ecology in response to Ecology's draft proposal.

**M-45-11, Complete 244-AR Vault Interim Status Actions**

**I. Near-Term Deliverables:**

- **M-45-11A, Complete 244-AR Vault Interim Status Actions**  
Due: 9/30/03  
Status: On schedule

**II. Significant Accomplishments:**

- Completed Partial Core Bore (4/02/02)

**III. Significant Planned Actions in the Next Six Months:**

- Submit AB amendment (5/15/02)
- Develop and perform operator training (5/17/02)
- Install exterior transfer piping (5/24/02)
- Final Core Bore of Cover Blocks (7/01/02)
- Install interior pumps and piping, electrical power, and instrumentation and control (7/29/02)
- Process Control Plan review consists of Final Design, Equipment Description Document, Authorization Basis Amendment, Unreviewed Safety Question, and Air Source Pump (8/22/02)
- Complete Plant Operating Procedures (8/23/02)
- Implement Authorization Basis Amendment (8/29/02)
- Review and release Process Control Plan (9/6/02)
- Conduct Plant Readiness MSA (10/21/02)
- Completion of Readiness Assessment (11/4/02)

**IV. Issues:**

- The current critical path has limited float for the completion of the milestone workscope.

**M-48-00, DST Integrity Assessment Program****I. Deliverables:**

- **M-48-02**, Submit to Ecology a Report Assessing Technology Development  
Due: 9/17/00 and every six months thereafter until equipment is deployed  
Status: Latest report signed March 14, 2002.
- **M-48-10**, Submit Results of Four DSTs not Previously Examined  
Due: 9/30/02  
Status: On-going
- **M-48-11**, Submit Results of Four DSTs not Previously Examined  
Due: 9/30/03  
Status: On-going
- **M-48-12**, Submit Results of Four DSTs not Previously Examined  
Due: 9/30/04  
Status: On-going
- **M-48-13**, Submit Results of Four DSTs not Previously Examined  
Due: 9/30/05  
Status: On-going
- **M-48-14**, Submit Written Integrity Report for the DST System  
Due: 3/31/06  
Status: On-going
- **M-48-15**, Submit a Report to Ecology for the Re-examination of Six DSTs by Ultrasonic Testing  
Due: 9/30/07  
Status: On-going
- **M-48-00**, Complete Tank Integrity Assessment Activities for Hanford Double Shell Tanks System  
Due: 9/30/07  
Status: On-going

**II. Significant Accomplishments:**

- Proceeding with planned work scope for analyzing high corrosion areas of AY-101 annulus. This work consists of utilizing an outside contractor to provide a device to clean the annulus surface. Completion of cleaning and UT of high corrosion areas, and tracer gas results corresponding to stained areas is scheduled in FY 2002.

**III. Significant Planned Actions in the Next Six Months:**

- Complete milestones as listed above.
- Caustic addition to AZ-101 planned for mid-May 2002.
- Caustic addition to AN-106 planned for early June 2002.
- TSAFT technology is progressing. Expect to test the system sometime later in FY 2002.
- Complete UT on AW-104m AW-102 by end of FY 2002.
- Complete video inspections for 10 DSTs by end of FY 2002.

**IV. Issues:**

• **AY-101:**

The level restriction of 80 inches is still in effect.

**Milestone M-46-00, Double-Shell Tank Space Evaluation****I. Deliverables:**

- **M-46-01H, Concurrence of Additional Tank Acquisition**  
Due: 3/15/02  
Status: On schedule. Ecology issued a letter dated 3/18/02 stating they are not proposing new milestones based on DOE meeting 4 criteria.
- **M-46-00I, Double-Shell Tank Space Evaluation**  
Due: 9/30/02  
Status: On schedule
- **M-46-01I, Concurrence of Additional Tank Acquisition**  
Due: 11/30/02  
Status: On schedule
- **M-46-00J, Double-Shell Tank Space Evaluation**  
Due: 9/30/03  
Status: On schedule
- **M-46-01J, Concurrence of Additional Tank Acquisition**  
Due: 11/30/03  
Status: On schedule
- **M-46-00K, Double-Shell Tank Space Evaluation**  
Due: 9/30/04  
Status: On schedule
- **M-46-01K, Concurrence of Additional Tank Acquisition**  
Due: 11/30/04  
Status: On schedule
- **M-46-00L, Double-Shell Tank Space Evaluation**  
Due: 9/30/05  
Status: On schedule
- **M-46-01L, Concurrence of Additional Tank Acquisition**  
Due: 11/30/05  
Status: On schedule
- **M-46-00M, Double-Shell Tank Space Evaluation**  
Due: 9/30/06  
Status: On schedule
- **M-46-01M, Concurrence of Additional Tank Acquisition**  
Due: 11/30/06  
Status: On schedule

**II. Significant Accomplishments:**

- Completed milestone M-46-00H, Double-Shell Tank Space Evaluation and delivered the document to Ecology.

**III. Significant Planned Actions in the Next Six Months:**

- Cases are being developed for the September 2002 update of DST Tank Farm Contractor Operation and Utilization Plan (TFC O&UP), DST space evaluation and SST retrieval sequence, ORP is currently seeking Ecology input for the scope and assumptions of the cases to be modeled.

**IV. Issues:**

- Decide on the case studies for the next options evaluation.



**Milestone M-47-00, Complete Work Necessary to Support Acquisition And Phase I Operations of Hanford Site High-Level Radioactive Waste Treatment, Storage, and Disposal Facilities**

**I. Near-Term Deliverables:**

- **M-47-05**, Start construction of waste retrieval and mobilization systems for selected initial low-activity waste feed tank (other than AZ-101 and AZ-102)  
Due: 5/31/04  
Status: On schedule. Project planning and engineering activities for the first waste transfer tank, AP-101, transfer pump replacement have started.
- **M-47-03**, Start construction of waste retrieval and mobilization systems for selected initial high-level waste feed tank  
Due: 7/30/04  
Status: On schedule. The first high-level waste feed tank AZ-101, retrieval system Title II design was completed in September 2001. Critical Decision (CD3) for start of construction was received.
- **M-47-01**, Complete construction of the transfer system from the 241-AP Tank Farm to the BNFL Facility to support the start of hot commissioning of the Phase I Tank Waste Treatment Complex  
Due: 3/31/06  
Status: On schedule.
- **M-47-05A**, Complete startup and turnover activities for waste retrieval and mobilization systems for selected initial low-activity waste feed tank (other than AZ-101 or AZ-102)  
Due: 4/30/06  
Status: On schedule. Startup and turnover follows installation of the AP-101 transfer pump (refer to M-47-05 status above).

**Out year (Post 2006) Milestones:**

- **M-47-02**, Complete startup and turnover activities for required transfer system upgrades to allow transfer of first high-level waste feed to the Pretreatment/Treatment Complex  
Due: 3/31/07  
Status: On schedule. Startup and turnover follow transfer line construction. Construction is ongoing for new 3" transfer lines from AZ to AP tank farms (SN-634, SN-636, and SN-637).
  - AP-WTP transfer system status, refer to M-47-01 above.

- **M-47-03A, Complete startup and turnover activities for waste retrieval and mobilization systems for selected initial high-level waste feed tank**  
Due: 2/28/07  
Status: On schedule. Startup and turnover follow construction and installation of AZ-101 mixer pump (refer to M-47-03 status above).
  - AZ-101 mixer pump final test report was completed in September 2001.
  - Laboratory test reports of HLW solids particle properties were issued in November 2001.
  - Analysis of laboratory data was completed in January 2002.
  - Waste feed delivery transfer system analysis completed in March 2002.
- **M-47-04, Complete startup and turnover activities for required transfer system upgrades to allow transfer of first low-activity waste feed to the pretreatment/treatment complex**  
Due: 6/30/07  
Status: On schedule. Startup and turnover follow AP-101 transfer pump installation (refer to M-47-01 status above).
- **M-47-06, Complete negotiation of additional agreement requirements (milestones, target dates, and associated language) governing work necessary to support completion of treatment complex Phase I operations by 2018**  
Due: 6/30/10  
Status: Negotiations are not yet underway.

## II. Significant Accomplishments:

- Awarded contract for TFC/WTP Waste Transfer Piping
- Awarded contract for procurement of AZ-101 transfer pump
- Comments transmitted to WDOH and EPA on draft AZ Rad-NOC

## III. Significant Planned Actions in the Next Six Months:

- Complete Title II design for AN-101 retrieval system
- Award construction contract for AZ-101 retrieval system
- Award contract for fabrication of AN-101 retrieval system mixer pumps
- Initiate AP valve pit construction
- Initiate AP-WTP pipeline construction

### Near-term Actions Needed by DOE or Ecology:

- WDOH/EPA – Approve AZ Farm Radiological NOC (February 2002)
- Critical Decision 3 for AN-101 (August 2002)

**IV. Issues:**

- Based on preliminary testing of waste tank contents, the current project transfer system design pressure may not be adequate for worst-case HLW transfers. Additional analysis of waste properties is ongoing and is expected to reduce the bounding transfer pressure. If the results exceed current project design pressures, options for resolution include alternate transfer strategies or adding booster pump capabilities.
- Waste transfer calculations have shown transfers can be completed with pressures less than 400 psi (RPP-5436). This pressure is well within the design limits of the project piping. Issue closed.

**Milestone M-45-00, Complete Closure of All Single-Shell Tank Farms****I. Near-Term Deliverables:**

- **M-45-00B, "Complete Near-Term SST Waste Retrieval Activities"**  
Due: 9/30/2006  
Status: On schedule with respective supporting milestones as noted below.
- **M-45-02, "Submit Annual Updates to SST Retrieval Sequence Document"**  
Due: 9/30/02 (and annually thereafter)  
Status: On schedule. Work to update background information on SST saltwell pumping, SST risk status, tank transfers, waste generators, evaporator campaigns, and best-basis inventory revisions continue for the FY 2002 update. The report will be published in conjunction with M-46-001, Double-Shell Tank Space Evaluation, as a single integrated document.
- **M-45-03-T03, "Submit S-112 Saltcake Waste Retrieval Technology Demonstration Functions and Requirements (F&R) Document"**  
Due: 12/30/01  
Status: Complete
- **M-45-03-T04, "Submit C-104 Sludge/Hard Heel, Confined Sluicing and Robotic Technologies, Waste Retrieval Demonstration Functions and Requirements Document"**  
Due: 12/31/01  
Status: Complete
- **M-45-03D, "Complete S-112 Saltcake Waste Retrieval Technology Demonstration Design" (all physical systems including LDMM provisions)**  
Due: 5/31/03  
Status: On schedule. Potential delays associated with Ecology extension of F&R document approval will impact start of conceptual design (see "Issues" section).

In-tank saltcake dissolution equipment has been installed in tank U-107. Start of proof-of-concept testing of saltcake dissolution has been delayed due to problems achieving pumping rates during saltwell pumping operations in support of interim stabilization. This delay is not expected to impact the S-112 design milestone.

Problems have been isolated to plugging in the transfer line from U Farm to SY Farm. Mechanical unplugging options are being reviewed should the planned caustic soak/flush operation not be successful.

Trouble-shooting and corrective maintenance activities are underway for the Topographical Mapping System (TMS) in accordance with the Corrective Action Plan to address problems experienced during initial testing of the TMS. Accelerated Site Technology Deployment (ASTD) funding has been awarded by the DOE Office of Science and Technology (EM-50) to develop and deploy a "second generation" TMS.

Preliminary engineering for S-112 is complete. DOE-ORP approval of the *Justification for Mission Need* (JMN) has been obtained. The Statement of Work for the "Design and Fabricate" contract for the S-112 retrieval system is going through review and approval. Recently identified issues associated with the "hose-in-hose" above-ground transfer line couplings are being followed. No impacts are anticipated at this point in time.

- **M-45-00C**, "Complete Renegotiation of Second Phase SST Waste Retrieval Activities" (September 30, 2006 through September 30, 2015)  
Due: 2/28/04 (Negotiations will consider need for additional compliant tank space. If WTP construction is not initiated by 12/31/2001, as defined by M-62-06, the due date for the M-45-00C milestone will automatically be adjusted to 4/30/2002).  
Status: This milestone is in dispute.
- **M-45-03G**, "Complete C-104 Sludge/Hard Heel, Confined Sluicing and Robotic technologies, Waste Retrieval Cold Demonstration"  
Due: 6/30/04  
Status: On schedule. Contract awarded for design, fabrication, and testing of a Mobile Retrieval System adapting commercially available equipment for Hanford Site use. Preliminary cold testing of the MRS is planned by the end of September 2002. Oak Ridge National Laboratory has completed its review of the test plan.
- **M-45-03E**, "Complete S-112 Saltcake Waste Retrieval Technology Demonstration Construction (all physical systems including LDMM provisions)"  
Due: 9/30/04  
Status: On schedule
- **M-45-03H**, "Complete C-104 Sludge/Hard Heel, Confined Sluicing and Robotic Technologies, Waste Retrieval Demonstration Design (all physical systems including LDMM provisions)"  
Due: 9/30/04  
Status: On schedule. Potential delays associated with Ecology extension of F&R document approval will impact start of conceptual design (see "Issues" section). Preliminary design has been initiated, and a Statement of Work for project review by "outside experts" on slurry retrieval and transfer processes has been prepared and issued.
- **M-45-03C**, "Complete Full-Scale Saltcake Waste Retrieval Technology Demonstration at Tank S-112 (all physical systems including LDMM provisions)"  
Due: 9/30/05  
Status: On schedule. Initial testing of saltcake dissolution equipment is planned in tank U-107 in conjunction with interim stabilization activities. Current problems associated with transfer line plugging at U-107 is not anticipated to impact this milestone. See description under M-45-03D for status of U-107 work.

- **M-45-05E, "Complete Second Tank Initial Retrieval Project Design (all physical systems including LDMM provisions)"**  
Due: 6/30/06  
Status: On schedule
- **M-45-05A, "Complete Initial Waste Retrieval from SST S-102"**  
Due: 9/30/06  
Status: On schedule
- **M-45-03I, "Complete C-104 Sludge/Hard Heel, Confined Sluicing and Robotic Technologies, Waste Retrieval Demonstration Construction (all physical systems including LDMM provisions)"**  
Due: 9/30/06  
Status: On schedule
- **M-45-05-T16, "Submit S-102 Initial Waste Retrieval Functions and Requirements (F&R) Document"**  
Due: 10/30/02  
Status: On schedule. Conceptual design has been initiated and will support completion of the F&R document.
- **M-45-05B, "Complete S-102 Initial Retrieval Project Design (all physical systems including LDMM provisions)"**  
Due: 3/31/04  
Status: On schedule. The Preliminary Engineering Report, Project Definition Criteria, and LDMM Design Concept Report have been completed. Conceptual design efforts are underway. Cold testing of the AEAT Power Fluidics System and Russian Pulsating Mixing and Pumping System is progressing.  
  
A 30% review of the Conceptual Engineering and Design was held March 11-13, 2002. This 30% Conceptual Engineering and Design will present an optimized design for waste retrieval and transfer using the AEAT Power Fluidics System.
- **M-45-05C, "Complete S-102 Initial Waste Retrieval Project Construction (all physical systems including LDMM provisions)"**  
Due: 11/30/05  
Status: On schedule
- **M-45-05D, "Establish Completion Date for the Second Tank, Initial Waste Retrieval"**  
Due: 12/31/02  
Status: On schedule. Selection will be based on information in report RPP-8554, "Single-Shell Tank Retrieval Sequence and Double-Shell Tank Space Evaluation," prepared under M-45-02. This activity is also related to completing renegotiation of second phase SST waste retrieval activities under M-45-00C.

- **M-45-05F, "Complete Second Tank Initial Waste Retrieval Project Construction (all physical systems including LDMM provisions)"**  
Due: TBE (identification of specific tank and M-45-05F milestone due date to be established no later than 12/31/02).  
Status: On schedule.

The milestone due date will be based on information in report RPP-8554, "Single-Shell Tank Retrieval Sequence and Double-Shell Tank Space Evaluation," prepared under M-45-02 and will be supported by HTWOS model simulations. This activity is related to establishing a completion date for the second tank initial waste retrieval under M-45-05D.

- **M-45-05-T17, "Submit Second Tank Initial Waste Retrieval Functions and Requirements (F&R) Document"**  
Due: 4/30/04  
Status: On schedule.  
Selection will be based on information in report RPP-8554, "Single-Shell Tank Retrieval Sequence and Double-Shell Tank Space Evaluation," prepared under M-45-02. This activity is also related to completing renegotiation of second phase SST waste retrieval activities under M-45-00C.
- **M-45-06-T05, "Submit Tank Farm Closure/Post-Closure Work Plan Update"**  
Due: 6/30/02  
Status: On schedule. DOE-ORP comments on the draft were incorporated, and the final report was submitted to DOE-ORP. Following ORP review and approval, the final report will be submitted to Ecology as scheduled.
- **M-45-06-T06, "Submit Tank Farm Closure/Post Closure Work Plan Update"**  
Due: 6/30/04  
Status: On schedule
- **M-45-06-T07, "Submit Tank Farm Closure/Post Closure Work Plan Update"**  
Due: 6/30/06 (and every two years thereafter)  
Status: On schedule
- **M-45-12-T01, "Tank Space Options Report"**  
Due: 2/28/02  
Status: Completed.  
Based on results presented in M-45-12-T01, "Tank Space Options Report" and M-46-00H, "DST Space Evaluation", Ecology concurred with the recommendation to not construct new DSTs at this time. The concurrence is contingent on meeting four criteria listed in Ecology's letter, "Concurrence of Additional Tank Acquisition" (M-46-01H). ORP and CHG staffs are currently reviewing the details of the letter.

**Out-Year (Post 2006) Milestones:**

- M-45-00, "Complete Closure of all SST Farms" by 9/30/2024
- M-45-03F, "Complete Full-Scale Sludge/Hard Heel, Confined Sluicing and Robotic Technologies, Waste Retrieval Demonstration a SST C-104" by TBE (to be established during M-45-00C negotiations).
- M-45-05, "Retrieve Waste from All Remaining SSTs" by 9/30/2018
- M-45-05-T05, "Initiate Tank Retrieval from 5 Additional SSTs" by 9/30/2007
- M-45-05-T06, "Initiate Tank Retrieval from 5 Additional SSTs" by 9/30/2008
- M-45-05-T07, "Initiate Tank Retrieval from 7 Additional SSTs" by 9/30/2009
- M-45-05-T08, "Initiate Tank Retrieval from 8 Additional SSTs" by 9/30/2010
- M-45-00D, "Complete Renegotiation of the Remainder of the SST Waste Retrieval and Closure Program" by 6/30/2011
- M-45-05-T09, "Initiate Tank Retrieval from 10 Additional SSTs" by 9/30/2011
- M-45-05-T10, "Initiate Tank Retrieval from 12 Additional SSTs" by 9/30/2012
- M-45-05-T11, "Initiate Tank Retrieval from 14 Additional SSTs" by 9/30/2013
- M-45-05-T12, "Initiate Tank Retrieval from 17 Additional SSTs" by 9/30/2014
- M-45-05-T13, "Initiate Tank Retrieval from 20 Additional SSTs" by 9/30/2015
- M-45-05-T14, "Initiate Tank Retrieval from 20 Additional SSTs" by 9/30/2016
- M-45-05-T15, "Initiate Tank Retrieval from 20 Additional SSTs" by 9/30/2017
- M-45-06, "Complete Closure of all SST Farms in Accordance with Approved Closure/Post Closure Plans" by 9/30/2024
- M-45-06-T03, "Initiate Closure Actions on an Operable Unit or Tank Farm Basis" by 3/31/2012
- M-45-06-T04, "Complete Closure Actions on one Operable Unit or Tank Farm" by 3/31/2014

**II. Significant Accomplishments:**

- Completed RPP-8554, "Single-Shell Tank Retrieval Sequence and Double-Shell Tank Space Evaluation."
- Completed "Tank Space Options Report" and in the process of investigating implementation of some options.
- Initiated S-112 Conceptual Design
- Initiated S-102 Conceptual Design
- Received approval of CD-0 for S-102
- Obtained approval of C-104 Preliminary Baseline Range (CD-1).



- Initiated C-104 Preliminary Design

### III. Significant Planned Actions in the Next Six Months:

- Continue work on the FY 2002 update of RPP-8554, "Single-Shell Tank Retrieval Sequence and Double-Shell Tank Space Evaluation."
- Continue evaluation of selected options for increasing DST space.
- Continue proof-of-concept testing of the AEAT Power Fluidics System and the Russian Pulsating Mixing and Pumping System in support of S-102 retrieval.
- Complete Conceptual Design for S-102 initial retrieval project.
- Complete 90% Draft of S-102 Initial Waste Retrieval F&R Document.
- Complete work associated with removal of plug from U-107 transfer lines.
- Complete "proof-of-concept" testing of the S-112 saltcake dissolution system and TMS in conjunction with U-107 interim stabilization saltwell pumping operations and incorporate lessons learned into S-112 saltcake retrieval system design.
- Initiate Conceptual Design for S-112 Saltcake Waste Retrieval Technology Demonstration Project.
- Complete "second generation" TMS development, demonstration, and deployment in S-112 through ASTD effort.
- Complete Preliminary Design for C-104 Waste Retrieval System.
- Approve CD-2 for C-104 (Approval of Performance Baseline).
- Complete design, factory acceptance testing, and cold testing of Mobile Retrieval System (MRS) for C-104.
- Continue performance testing and deployment demonstrations for down selected ex-tank leak detection technologies.

### IV. Issues:

Issue #1: Milestones for negotiation of "second phase" retrievals, remaining tank retrievals, and tank farm closure will provide the means for updating the M-45 series milestones. Completion of the milestones is subject to the following process:

- Funding uncertainties caused by the annual federal budgeting process.
- Technical uncertainties resulting from the ability to retrieve waste from SSTs in a manner to both meet the retrieval performance goals as well as the retrieval rates necessary to meet out-year commitments. Additional technical uncertainties include available DST tank space for receipt of SST wastes and processing capabilities of the Waste Treatment Plant.
- Regulatory uncertainties resulting from the final closure requirements and ultimate land use planning affect the ability to assess whether closure milestones can be achieved.

- Safety-related uncertainties are inherent in any plan that significantly accelerates retrieval and transfer rates beyond what has been accomplished in the past.
- Permitting uncertainties resulting from much of the planned activities being "first of a kind" retrieval and closure actions.

The actual occurrence of any of these uncertainties could cause schedule slippage for activities post-2006 and the need to submit a change request under provisions of Section 12.0 of the Action Plan. These uncertainties are also the reason that M-45-00C and M-45-00D were built into the recent updates to the M-45 series milestones.

A plan to address DST tank space issues will need to be developed within the next 3 years. The recently issued Tank Space Options Report is a critical first step in developing this plan. Efforts are also underway to evaluate several of the options presented in the Tank Space Options Report.

Issue #2: The ability to move forward with the retrieval system conceptual design for tanks C-104 and S-112 is tied to Ecology approval of the Functions and Requirements (F&R) documents submitted to Ecology on December 21, 2001 as "primary" TPA documents. Ecology issued a letter [Letter, S. Dahl, Ecology, to J. E. Rasmussen, ORP, "Extension of Review Period for Functions and Requirements (F&R) Documents for Milestones M-45-03-T04 and M-45-03-T03 (C-104 and S-112 SST Retrieval Demonstrations)," dated February 1, 2002] extending its date for completion of F&R review and comment from February 4, 2002 to March 8, 2002. Reasons for the extension included the "incomplete nature of the reports and the significant nature of the effort." Extension of F&R approval by Ecology will result in a "day-for-day" slip in S-112 and C-104 project schedules.

**M-45-50, -60 Single-Shell Tank Corrective Action**

**I. Near-Term Deliverables:**

- **M-45-55-T01**, Submit to Ecology for review and comment as an Agreement secondary document a Field Investigation Report (FIR) pursuant to the site-specific SST WMA Phase I RFI/CMS Work Plan addenda for WMA S/SX  
Due: 1/31/02  
Status: Complete. The S/SX FIR was delivered to Ecology on schedule, meeting this milestone.
- **M-45-55-T02**, Submit to Ecology for review and comment as an Agreement secondary document a Field Investigation Report pursuant to the site-specific SST WMA Phase I RFI/CMS Work Plan addenda for WMA B, BX, and BY  
Due: 01/31/03  
Status: Work started; forecast on schedule. The due date of this milestone was changed to 1/31/03, to align reporting requirements with site characterization activities.
- **M-45-55-T03**, Submit to Ecology for review and comment as an Agreement secondary document a Field Investigation Report pursuant to the site-specific SST WMA Phase I RFI/CMS Work Plan addenda for WMA T, TX, and TY  
Due: 6/2003  
Status: Work not started; forecast on schedule.
- **M-45-55**, Submit to Ecology for review and approval as an Agreement primary document a Phase 1 RFI report integrating results of data gathering activities and evaluations for WMAs S-SX, T, TX-TY, and B-BX-BY and related activities, including groundwater monitoring and impacts assessment using Hanford Site groundwater models, with conclusions and recommendations  
Due: 2/2004  
Status: Work not started; forecast on schedule.
- **M-45-60**, Submit to Ecology for review and approval as an Agreement primary document DOE's RFI/CMS Work Plan for SST WMAs  
Due: 6 months following RFI report approval  
Status: Work not started; forecast on schedule.

**II. Significant Accomplishments:**

- Agreed in principle with Ecology to continue field exploration work for a second year in WMAs TX-TY and T.
- Initiated the testing of the remaining pressurized water lines in SST farms. Line on east side of TY Farm failed leak test and will be cut and capped.
- Initiated fieldwork in the TX SST Farm in May. Plans are to collect soil samples from 3 boreholes this FY.
- Submitted the results of testing well W23-19 (technetium well in SX SST Farm) to Ecology along with recommendations for future actions.

### III. Significant Planned Actions in the Next Six Months:

- Participate in C3T exercise for ground water monitoring.
- Drilling of three boreholes in T-TX-TY WMAs to be complete by August 2002.
- Initiate Interim Measures for run-on control for two East SST farms.

### IV. Issues:

- As requested by Ecology, DOE is assessing data from U Farm and will schedule a meeting to discuss the need for any additional corrective actions and TPA milestones beyond those already implemented.

**Milestone M-43-00, Tank Farm Upgrades****I. Near-Term Deliverables:**

- **M-43-15, Start Construction in 4<sup>th</sup> farm**  
Due: 3/29/02  
Status: Construction started on 2/28/01. Letter sent 3/26/02.
- **M-43-16, Start Construction in 5<sup>th</sup> farm**  
Due: 6/30/03  
Status: On schedule (SY farm)
- **M-43-00, Complete Tank Farm Upgrades**  
Due: 6/30/05  
Status: On schedule, pending definition of completion.

**II. Significant Accomplishments:**

- Installed NPW Cover Blocks in the AW-A pit.
- Installed jumpers in the AW-A pit
- Removed cover blocks from AN-03A pit and initiated jumper removal and pit cleanout.
- Removed cover blocks from AN-01A pit; removed jumpers from AN-01A pit.

**III. Significant Planned Actions in the Next Six Months:**

- Complete AN to 200E WTS construction
- Complete Phase 1 AW upgrades construction
- Complete installation of the WTS pipelines (except cross-site tie in)
- Prepare M-43 Closure Strategy document

**Near-term Actions Needed by DOE or Ecology:**

- Ecology stated that they would be able to support negotiations on M-43-00 in 2002. DOE has agreed to sit down with Ecology this summer to discuss interfaces with other projects and activities.

**IV. Issues:**

- See near-term actions needed by DOE or Ecology.

**M-62, Complete Pretreatment Processing and Vitrification of Tank Wastes**

**I. Near-Term Deliverables:**

- **M-62-01, Submit Semi-Annual Compliance Report**  
Due: Semi-annually beginning July 31, 2000  
Status: The next report is due July 31, 2002.
- **M-62-06, Start of Construction – Phase I Treatment Complex**  
Due: (Originally) July 31, 2001  
New Date: (Pending Change Form Approval) December 31, 2002  
Status: On schedule with respect to the new date. A Recovery Plan tentative agreement was signed 3/11/02, and is out for public comment.
- **M-62-07, Construction Progress Milestones (2) – Phase I Treatment Complex**  
Due: TBD  
Two new Construction Progress Milestones have been defined and submitted in the Recovery Plan. Pending approval of the associated change form, the new milestones will be:
  - M-62-07A, Initial erection of LAW Structural Steel in the Vit. Facility  
Proposed Due Date: October 30, 2003
  - Recovery Plan: M-62-07B, Complete Assembly of LAW Melter  
Proposed Due Date: October 30, 2005
- **M-62-08, Submittal of Hanford Tank Waste Phase II Treatment Alternatives Report**  
Due: July 31, 2005  
Status: On schedule  
The Strategic Planning Group within the ORP Office of the Assistant Manager for Integration and Control has initiated long range planning for the remainder of the Hanford waste immobilization. Efforts include proposed R&D needs, tank waste inventory projections and plant sizing options. Initial submittal of the report is scheduled for July 31, 2005.
- **M-62-03, Submit DOE petition for RCRA de-listing of vitrified HLW**  
Due: December 31, 2006  
Status: The LDR and delisting DQO are under review and comment. Research and technology work continues. This activity is on schedule to be completed by 12/31/06.

**Out year (Post 2006) milestones:**

- **M-62-09, Start (Hot) Commissioning - Phase 1**  
Due: December 31, 2007  
Status: Hot Commissioning of the Phase I Treatment Complex is on schedule. This milestone is a contract requirement for the Waste Treatment Plant; reference Section F, paragraph F.1 (b) milestone M-4. The contractor is incentivised to meet or beat the start of Hot Commissioning by December 31, 2007.

- **M-62-10, Complete Hot Commissioning – Phase I Treatment Complex**  
Due: December 31, 2009  
New Proposed Date: (Pending Change Form Approval) January 31, 2011  
Status: On schedule with respect to new date
  - **M-62-11, Submittal of Hanford Tank Waste Treatment Phase II Plan**  
Due: 3 years after M-62-10  
New Proposed Date: (Pending Change Form Approval) January 31, 2014  
Status: On schedule
  - **M-62-00A, Complete pretreatment, processing and vitrification of Hanford Phase I HLW and Low Activity Waste (LAW)**  
Due: February 28, 2018  
Status: On schedule  
As committed to in the BNI contract, stated in the change package, DOE is on a schedule to complete the first 10% of waste processing measured by mass and 25% of waste processing measured by radioactivity by February 28, 2018.
  - **M-62-00, Complete pretreatment processing and vitrification of Hanford high level and low activity tank waste**  
Due: December 31, 2028  
Status: On schedule
- ORP remains committed to this activity. The completion date for this milestone will be evaluated on a continual basis as we progress with this program. Committed means that DOE intends to "bring about" or perform all work to ensure that Hanford's high-level radioactive waste is vitrified by December 31, 2028.
- **M-62-12, Issuance of DOE Authorization to Proceed – Phase II Treatment**  
Due: TBD  
Status: This milestone will be negotiated in the 2014 timeframe.

## II. Significant Accomplishments:

### Construction

- Installation of Construction Office Building is nearly complete.
- Commenced construction on warehouse and PT Change House.
- Continued underground pipe installation (fire water, potable water, compressed air, sanitary, and gas pipe) and installation of temporary construction electrical substations.
- Completed significant rebar placement for the LAW facility base mats and wall dowels.
- Completed significant construction associated with LAW and HLW crane footings
- Underway with rebar placement for the bottom base mat of the HLW facility

- Completed significant work associated with deep excavation retention system shoring in the HLW and PT facilities.
- Completed most of the mud mat installation in the PT facility.

#### Design

- BNI placed a contract for independent qualified registered professional engineer (IQRPE) certification of tank design integrity assessments required by Washington *Dangerous Waste* regulations.
- BNI has sufficiently advanced the LAW, HLW and PT designs and has submitted Construction Authorization Requests (CAR) to DOE. Approval of the HLW and LAW CARs is scheduled for October 2002 and the PT CAR will be approved in January 2003.
- Detail design is generally 10% complete for PT, 15% complete for LAW, and 15% for HLW. Front-end engineering is 70% complete for PT and 100% complete for LAW and HLW.

#### Permits

- Dangerous Waste Permit – Draft permit to be released for public comments by 5/15/02. Working with Ecology to obtain temporary authorization to start construction on July 1, 2002.

#### Administrative

- Critical Decision (CD) 3b presentation made to the ESAAB on May 14, 2002. Decision is pending closure of EIR findings, DNFSB issues associated with seismic standards, review and approval of RPP-PMP, and permit issuance.
- Preparing for annual baseline review to commence on May 20, 2002. Review of quantity development packages is underway.
- Preparing for various independent reviews pursuant to CD-3. (EM-1 review will commence June 17<sup>th</sup>, External Independent Review [EIR] will start in July) Preparing responses to Lines of Inquiry and conducting various self-assessments.

### **III. Significant Planned Actions in the Next Six Months:**

- Obtain CD-3B, obtain necessary OSR approvals for PCARs, and commence pouring of structural concrete for LAW and HLW base mats and walls to grade.
- Host External Independent Review for CD-3c in June/July time frame.
- DOE and BNI will execute the yearly project baseline update.
- Design and procurement of materials and resources will continue for all the WTP facilities.



- Limited construction work will continue along with commencement of electrical underground utilities.
- Receive DWP

**IV. Issues:**

Ecology and DOE management have been meeting to resolve the last of the permitting issues for the start of construction.

**M-92-05, Inclusion of Hanford Site Cs/Sr treatment and/or repackaging parameters in DOE  
TWRS Phase II request for proposals**

**I. Near-Term Deliverables:**

- M-92-05, Inclusion of Hanford Site Cs/Sr treatment and/or repackaging parameters in DOE TWRS Phase II request for proposals

Due: 6/30/03

Status: According to M-62-11 and M-62-12 milestones, DOE will not be seeking Phase II requests for proposals until the 2014 time frame. However, in the current BNI Contract C.7, Facility Specification, the following requirement is stipulated:

"The Contractor shall design the WTP to ensure that the plant is designed and built with features to provide increased operational capacities, as follows:

(4) Pretreatment can connect to a potential new facility designed to receive and treat the Hanford Cs and Sr capsules prior to incorporation into the HLW feed for immobilization in the HLW Vitrification Facility."

Note: This issue is being addressed in CT3 efforts.

**Milestone M-90-00, Complete Acquisition of New Facilities, Modifications of Existing facilities, and/or Modifications of Planned Facilities, as Necessary for Storage of Hanford Site Immobilized High Level Waste (IHLW), Immobilized Low Activity Waste (ILAW), and Disposal of ILAW, and M-20-00, Submit Part B Permit Applications**

**I. Near-Term Deliverables:**

- **M-20-56, Submit Canister Storage Facility Part B Permit Application**  
Due: 6/30/02  
Recovery Plan Date: 6/30/03  
Status: On schedule
- **M-20-57, Submit ILAW Disposal Facility Certified Part B Permit Application to Ecology**  
Due: 8/31/02  
Recovery Plan Date: 6/30/03  
Status: On schedule
- **M-90-09-T01, Complete Detailed Design of ILAW Disposal Facility Critical Systems to 80%**  
Due: 3/30/04  
Recovery Plan Date: 5/30/03  
Status: On schedule
- **M-90-08, Initiate ILAW Disposal Facility Construction.**  
Due: 7/31/04  
Recovery Plan Date: 2/28/05  
Status: On schedule

**Out year (Post 2006) milestones:**

- **M-90-10, Initiate Placement of ILAW Waste Canisters in ILAW Disposal Facility**  
Due: 1/31/07  
Recovery Plan Date: 8/31/08  
Status: On schedule
- **M-90-11, Complete Canister Storage Facility Construction**  
Due: 2/1/07  
Recovery Plan Date: 6/30/09  
Status: On schedule

**II. Significant Accomplishments:**

- The NOI for the SEIS (for ILAW disposal) was sent to HQ -- February 2002.
- CHG submitted Part B Permit Application for the IHLW Canister Storage Facility to ORP -- April 30, 2002.

- CHG completed drilling three planned boreholes at the ILAW disposal site. One borehole had veered enough that it cannot be used for monitoring and will have to be decommissioned.
- CHG submitted draft project validation books for the ILAW Disposal Facility and IHLW Canister Interim Storage Facility – April 2002.
- Met with Ecology to reach an understanding on 80% design of critical systems in support of Recovery Plan milestones M-20-56 and M-20-57 – April 16, 2002.
- IHLW canister drop impact analyses report completed – May 2002.

**III. Significant Planned Actions in the Next Six Months:**

- Issue comprehensive study of ILAW retrieval considerations, including reasons why ILAW might be retrieved, ILAW package degradation rates, technologies, and costs – May 30, 2002.
- DOE approval of CHG recommendations for failed melter disposal location, size, and transportation strategy – May 2002.
- DOE approval of ILAW disposal waste acceptance criteria – May 2002
- DOE approval to start Project W-520 preliminary design – July 2002.
- FY 2002 Annual Summary Report for the ILAW PA Research and Development Activities – August 2002.
- Submit TPA milestone M-20-56 IHLW Part B Permit Application (based on conceptual design) to Ecology – June 30, 2002.
- Submit TPA milestone M-20-57 ILAW Part B permit application (based on conceptual design) to Ecology – August 31, 2002.
- Second meeting with Ecology to discuss a waiver for a liner for the planned melter disposal trench – TBD.
- Meet with Ecology to reach an understanding on 80% design of critical systems in support of Recovery Plan milestones M-20-56 and M-20-50 – TBD.
- CHG submits PSAR/SARP mark up for Project W-464 to ORP – September 30, 2002.

# Backup Information: Cost and Schedule Variance Analysis

**TOTAL RIVER PROTECTION PROJECT  
ALL DIRECT FUNDS (CHG & ORP/PNNL)  
PERFORMANCE MEASUREMENT - FYTD - ALL FUND TYPES**

DOLLARS IN THOUSANDS

| 1. TITLE: River Protection Project   |  |                   |                   | 2. REPORTING PERIOD: 25-Mar-02<br>21-Apr-02 |                                |                   | 3. HQ NUMBER:                    |            |               |           |           |                           |
|--|--|-------------------|-------------------|---|--------------------------------|-------------------|----------------------------------|------------|---------------|-----------|-----------|---------------------------|
| 4. PARTICIPANT NAME AND ADDRESS:<br>CH2M HILL Hanford Group<br>P. O. Box 1500<br>Richland, Washington 99352-1505 |  |                   |                   | 5. COST PLAN DATE: 01-Oct-01 to 30-Sep-02   |                                |                   | 6. START DATE: 01-Oct-00         |            |               |           |           |                           |
|  |  |                   |                   |   |                                |                   | 7. FINISH DATE: 30-Sep-06        |            |               |           |           |                           |
| PBS / TITLE  |  | REPORTING PERIOD  |                   |   | CUMULATIVE FISCAL YEAR TO DATE |                   |                                  |            |               |           | BUDGET    |                           |
|  |  | Budgeted Cost     |                   | Actual Cost<br>Work<br>Performed            | Budgeted Cost                  |                   | Actual Cost<br>Work<br>Performed | Variance   |               |           |           | AT<br>COMPLETION<br>(BAC) |
|  |  | Work<br>Scheduled | Work<br>Performed |   | Work<br>Scheduled              | Work<br>Performed |                                  | Schedule   | Schedule<br>% | Cost      | Cost<br>% |                           |
| TW03   | STORE WASTE  | 9,373.9           | 9,403.8           | 10,205.1                                    | 77,377.4                       | 64,649.4          | 68,949.7                         | (12,728.0) | -16.4%        | (4,300.3) | -6.7%     | 127,530.4                 |
| TW04   | RETRIEVE WASTE   | 3,719.7           | 3,210.1           | 2,506.6                                     | 26,575.3                       | 19,467.0          | 16,703.1                         | (7,108.3)  | -26.7%        | 2,763.9   | 14.2%     | 54,695.9                  |
|  | W-211 - Initial Tank Retrieval System - Line Item                                | 1,022.1           | 82.3              | 268.4                                       | 3,693.0                        | 2,726.6           | 3,737.4                          | (966.4)    | -26.2%        | (1,010.8) | -37.1%    | 13,213.8                  |
|  | W-314 - Tank Farm Restoration and Safe Operations - L                            | 2,349.3           | 3,027.1           | 2,788.7                                     | 21,976.3                       | 20,159.8          | 26,101.9                         | (1,816.5)  | -8.3%         | (5,942.1) | 0.0%      | 44,445.2                  |
|  | TOTAL RETRIEVE WASTE   | 7,091.1           | 6,319.5           | 5,563.7                                     | 52,244.6                       | 42,353.4          | 46,542.4                         | (9,891.2)  | -18.9%        | (4,189.0) | -9.9%     | 112,354.9                 |
| TW06   | TREAT WASTE  | 777.3             | 779.5             | 71.2  | 5,002.4                        | 4,877.8           | 587.6                            | (124.6)    | -2.5%         | 4,290.2   | 88.0%     | 9,617.5                   |
|  | W-519 - Privatization Infrastructure - Line Item                                 | 6.9               | 0.0               | 0.0   | 442.5                          | 0.0               | 0.0                              | (442.5)    | -100.0%       | 0.0       | #DIV/0!   | 442.5                     |
|  | W-530 - Waste Treatment & Immobilization Plant                                   | 0.0               | 0.0               | 2.6   | 0.0                            | 0.0               | 57.8                             | 0.0        | #DIV/0!       | (57.8)    | #DIV/0!   | 0.0                       |
|  | TOTAL TREAT WASTE  | 784.2             | 779.5             | 73.8  | 5,444.9                        | 4,877.8           | 645.4                            | (567.1)    | -10.4%        | 4,232.4   | 86.8%     | 10,060.0                  |
| TW09   | DISPOSE WASTE  | 952.1             | 1,069.5           | 938.6                                       | 6,657.4                        | 6,189.3           | 4,710.7                          | (468.1)    | -7.0%         | 1,478.6   | 23.9%     | 11,945.4                  |
| TW10   | MANAGE PROJECT   | 10,038.3          | 9,626.7           | 11,804.4                                    | 69,631.1                       | 67,675.4          | 69,050.8                         | (1,955.7)  | -2.8%         | (1,375.4) | -2.0%     | 124,825.7                 |
| TW11   | CLOSE FACILITIES   | 1,001.0           | 286.0             | 852.3                                       | 9,227.1                        | 3,324.7           | 5,639.6                          | (5,902.4)  | -64.0%        | (2,314.9) | -69.6%    | 13,599.1                  |
| PED  | PROJECT ENGINEERING & DESIGN<br>(W-464 HLW Interim Storage Facility - Line Item) | 294.2             | 272.6             | 310.3                                       | 2,044.4                        | 2,039.4           | 1,204.5                          | (5.0)      | -0.2%         | 834.9     | 40.9%     | 3,322.5                   |
| RPP TOTAL EXPENSE/CENRTC/GPP   |  | 25,862.3          | 24,375.6          | 26,378.2                                    | 194,470.7                      | 166,183.6         | 165,641.5                        | (28,287.1) | -14.5%        | 542.1     | 0.3%      | 342,214.0                 |
| RPP TOTAL LINE ITEM  |  | 3,672.5           | 3,382.0           | 3,370.0                                     | 28,156.2                       | 24,925.8          | 31,101.6                         | (3,230.4)  | -11.5%        | (6,175.8) | -24.8%    | 61,424.0                  |
| RPP TOTAL  |  | 29,534.8          | 27,757.6          | 29,748.2                                    | 222,626.9                      | 191,109.4         | 196,743.1                        | (31,517.5) | -14.2%        | (5,633.7) | -2.9%     | 403,638.0                 |

## TW03 STORE WASTE

### PERFORMANCE SUMMARY

|          | Cumulative Performance – Store Waste |             |             |           |           |            |
|----------|--------------------------------------|-------------|-------------|-----------|-----------|------------|
|          | <u>BCWS</u>                          | <u>BCWP</u> | <u>ACWP</u> | <u>SV</u> | <u>CV</u> | <u>EAC</u> |
| HANDI    | \$67,047                             | \$54,289    | \$57,574    | -19.0%    | -6.0%     |            |
| Pending  | \$80,242                             | \$80,394    | \$74,787    | 0.2%      | 7.0%      | \$131,031  |
| Baseline |                                      |             |             |           |           |            |

### SCHEDULE VARIANCE

**Description and Cause:** The unfavorable schedule variance (-\$12.8M; -19.0%) is the result of the following:

Interim Stabilization and Isolation activities have been impacted by the failed AX-101 transfer line and the U-107 degraded transfer line.

Three cranes for DST Projects were not leased according to the original plan. A determination has been made that they are no longer required.

The 242-A Evaporator condenser replacement project has not been initiated this fiscal year. A technical basis has been developed to support deferral to FY 2004.

Core sampling of Tanks 241-AW-104 and 241-AW-105, planned for FY 2002, was accelerated and completed in FY 2001. In addition, the FY 2002 tank sampling plan, which identifies tank sampling needs for Capacity and Inventory Project Management activities, has been refined. This results in activities that are no longer planned to be done in FY 2002.

DST Integrity Assessment activities have been delayed due to the decision to defer ultrasonic testing (UT) in Tanks 241-AN-103 and 241-AN-104 to FY 2006, and in Tank 241-AN-105 to the end of FY 2002.

**Impact:** Delays in Interim Stabilization and Isolation activities resulted in missing four SSPBIs in U Farm, as reported in Section 1.8.4, "Milestones Overdue." There is no impact to consent decree milestones.

The 242-A Evaporator, Capacity and Inventory Project Management, DST Integrity Assessment, and activities related to the cranes, will remain behind schedule.

**Corrective Action:** Interim Stabilization and Isolation work packages are being combined, where appropriate, to perform fieldwork activities in parallel. In addition, ORP and CHG have agreed to modify the PBI and the formal revision is in the approval process. A BCR will be prepared to revise the milestones consistent with the approved PBI.

Work scope related to the cranes will be deleted and the 242-A Evaporator condenser replacement project will be deferred as part of the Baseline Improvement Plan (BIP).

BCR RPP-02-033 was sent to ORP for approval on March 4, 2002, to delete those sampling activities no longer planned for FY 2002. BCR RPP-02-072 has been prepared to correct the budgeted cost of work scheduled associated with the accelerated completion of core sampling of Tanks 241-AW-104 and 241-AW-105 in FY 2001.

BCR RPP-02-048 has been prepared to defer the UT in Tanks 241-AN-103, 241-AN-104, and 241-AN-105.

## **COST VARIANCE**

**Description and Cause:** The unfavorable cost variance (-\$3.3M; -6.0%) is the result of the following:

Labor costs to maintain the trained and certified sampling crews, contract costs for engineering support, and material fabrication costs continue to be incurred against Field Sampling activities.

Higher than anticipated costs have been incurred for heightened security requirements (two-man rule), additional Command and Control Center requirements, Maintain DST Facilities, and DST Corrosion Mitigation activities.

Interim Stabilization has incurred higher than planned costs for pumping and instrumentation controls (PIC) skid modification/testing for Tanks 241-U-108 and 241-U-111. Additional costs were incurred for fabricating a new PIC skid for Tank 241-S-111, instead of modifying an existing one. In addition, the U Farm transfer line restriction has required unplanned costs for analysis and corrective action.

Costs have been incurred for work performed per ORP direction (Operations Directives OD-002, Revision 1, and OD-007).

**Impact:** The negative cost variance is expected to continue pending actions (funds change request/BCR) to provide additional funds/budget for these unplanned and ORP directed activities.



**Corrective Action:** BCR RPP-02-033 will result in a revision of the current tank sampling baseline and a reduction of the variance related to Field Sampling. BCR RPP-02-068 is being prepared to address issues caused by the need for heightened security. BCRs RPP-02-057 and RPP-02-048 are in process to provide funding and budget for the ORP directed workscope.

## TW04 RETRIEVE WASTE

### PERFORMANCE SUMMARY

| Cumulative Performance -- Retrieve Waste |             |             |             |           |           |            |
|--|-------------|-------------|-------------|-----------|-----------|------------|
|  | <u>BCWS</u> | <u>BCWP</u> | <u>ACWP</u> | <u>SV</u> | <u>CV</u> | <u>EAC</u> |
| HANDI                                    | \$45,154    | \$36,034    | \$40,067    | -20.2%    | -11.2%    |            |
| Pending Baseline                         | \$42,651    | \$40,198    | \$42,791    | -5.8%     | -6.4%     | \$102,451  |

### SCHEDULE VARIANCE

#### RETRIEVE WASTE – EXPENSE

**Description and Cause:** The unfavorable schedule variance (-\$6.0M; -31.1%) is the result of the following:

Conceptual design engineering on SSTs 241-S-102 and 241-S-112 is behind schedule due to the delay in completion of design. In addition, the proposal process for initiating expense Project W-523, "Tank C-104 Waste Retrieval System," preliminary design was longer than expected.

DST Retrieval and Transfer Systems Development activities are behind schedule due to trade studies, optimization studies, and key mission analysis work being delayed so that CHG could respond to ORP requested reprioritization of workscope.

The current baseline contains a placeholder schedule for conceptual design work in FY 2002 for DST Compliance Upgrades. It is now expected that initial design will not start until later in FY 2002.

**Impact:** Schedule recovery is anticipated by fiscal year end.

**Corrective Action:** The duration of design is being compressed on Tank 241-S-102 and Project W-523 to recover the schedule.

A BCR is being prepared for Tank 241-S-112 to align the baseline to the cost/schedule data in the approved preliminary engineering report RPP-7526, Revision 2, "Preliminary Engineering Report for the S-112 Saltcake Waste Retrieval Technology Demonstration Project."

BCR RPP-02-053 is being prepared to incorporate rebaselining of DST Retrieval and Transfer Systems Development activities and move partial workscope to Mission Analysis.

DST Compliance Upgrades Project activities are being addressed in the BIP and in BCR RPP-02-064.

## **RETRIEVE WASTE – CAPITAL PROJECTS**

### **Project W-211 - Initial Tank Retrieval System**

**Description and Cause:** The unfavorable schedule variance (-\$0.0M; -0.9%) is within the reporting threshold.

**Impact:** No impact.

**Corrective Action:** None required.

### **Project W-314 - Tank Farm Restoration And Safe Operations**

**Description and Cause:** The unfavorable schedule variance (-\$3.1M; -13.5%) is the result of delays in the start of AP, AY, and AZ Farms Phase II designs, and delay in AN Farm Phase II construction due to design revisions. In addition, work on Phase I AZ Upgrades, planned for FY 2002, was performed on an accelerated basis in FY 2001.

**Impact:** The schedule variance will continue until implementation of the actions in the recovery plan.

## **COST VARIANCE**

### **RETRIEVE WASTE – EXPENSE**

**Description and Cause:** The favorable cost variance (\$2.6M; 19.4%) is within the reporting thresholds.

**Impact:** No impact.

**Corrective Action:** None required.

## **RETRIEVE WASTE – CAPITAL PROJECTS**

### **Project W-211 - Initial Tank Retrieval System**

**Description and Cause:** The unfavorable cost variance (-\$0.7M; -21.4%) is a result of higher than planned costs for construction closeout, the waste physical properties analysis, project management, and for the Tank 241-AN-101 infrastructure design.

**Impact:** Cost recovery is anticipated prior to fiscal year end.

**Corrective Action:** BCRs will be prepared to document scope increases for the waste analysis and Tank 241-AN-101 infrastructure design.

### **Project W-314 - Tank Farm Restoration And Safe Operations**

**Description and Cause:** The unfavorable cost variance (-\$6.0M; -30.5%) is a result of higher than planned costs incurred for the Master Pump Shutdown System, and the Phase I AZ and AW Farm Upgrades, due to: higher than anticipated contamination levels; unexpected as-found field conditions; increased safety oversight; enhanced security measures; and enhanced work planning, conduct of operations and radiological controls. In addition, unplanned costs were incurred for Quality Assurance Support due to increased surveillance and inspection requirements.

**Impact:** The variance will continue until implementation of the BCR.

**Corrective Action:** The Project W-314 Recovery Plan has been submitted to ORP for review and BCR RPP-02-071 is in process.

### **TW06 TREAT WASTE**

#### **PERFORMANCE SUMMARY**

|          | Cumulative Performance – Treat Waste |             |             |           |           |            |
|----------|--------------------------------------|-------------|-------------|-----------|-----------|------------|
|          | <u>BCWS</u>                          | <u>BCWP</u> | <u>ACWP</u> | <u>SV</u> | <u>CV</u> | <u>EAC</u> |
| HANDI    | \$2,195                              | \$1,633     | \$207       | -25.6%    | 87.3%     |            |
| Pending  |                                      |             |             |           |           |            |
| Baseline | \$1,636                              | \$1,635     | \$207       | -0.1%     | 87.3%     | \$1,556    |

#### **SCHEDULE VARIANCE**

##### **TREAT WASTE – EXPENSE**

**Description and Cause:** The unfavorable schedule variance (-\$0.0M; -0.1%) is within the reporting threshold.

**Impact:** No impact.

**Corrective Action:** None required.

##### **TREAT WASTE – CAPITAL PROJECTS**

#### **Project W-519 - Phase I Privatization Infrastructure**

**Description and Cause:** The unfavorable schedule variance (-\$0.6M; -100.0%) is the result of completing all work in FY 2001, which included acceleration of FY 2002 scope.

**Impact:** The variance will continue until implementation of the acceleration BCR.

**Corrective Action:** A BCR for accelerated workscope is being prepared.

### **Project W-530 - Waste Treatment and Immobilization Plant**

**Description and Cause:** The schedule variance (\$0.0M; 0.0%) is within the reporting threshold.

**Impact:** No impact.

**Corrective Action:** None required.

### **COST VARIANCE**

#### **TREAT WASTE - EXPENSE**

**Description and Cause:** The favorable cost variance (\$1.5M; 90.7%) is within the reporting threshold.

**Impact:** No impact.

**Corrective Action:** None required.

#### **TREAT WASTE - CAPITAL PROJECTS**

### **Project W-519 - Phase I Privatization Infrastructure**

**Description and Cause:** The cost variance (\$0.0M; 0.0%) is within the reporting threshold.

**Impact:** No impact.

**Corrective Action:** None required.

### **Project W-530 - Waste Treatment and Immobilization Plant**

**Description and Cause:** The unfavorable cost variance (-\$0.0M; -0.0%) is within the reporting threshold.

**Impact:** No impact.

**Corrective Action:** None required.

### **TW09 DISPOSE WASTE**

#### **PERFORMANCE SUMMARY**

|          | Cumulative Performance - Dispose Waste |             |             |           |           |            |
|----------|--|-------------|-------------|-----------|-----------|------------|
|          | <u>BCWS</u>                            | <u>BCWP</u> | <u>ACWP</u> | <u>SV</u> | <u>CV</u> | <u>EAC</u> |
| HANDI    | \$5,206                                | \$4,620     | \$3,764     | -11.2%    | 18.5%     |            |
| Pending  |  |             |             |           |           |            |
| Baseline | \$5,382                                | \$4,800     | \$3,764     | -10.8%    | 21.6%     | \$10,604   |

#### **SCHEDULE VARIANCE**

#### **DISPOSE WASTE - EXPENSE**

**Description and Cause:** The unfavorable schedule variance (-\$0.6M; -14.0%) is the result of Borehole #3 activities, which were delayed while a decision was being made related to sampling strategy.

The late turnover of the 616 Building to CHG resulted in a delay in the start of the building renovation activity.

**Impact:** The scheduled activities will be recovered by fiscal year end.

**Corrective Action:** Drilling on Borehole #3 has started and the schedule will be recovered.

Work is being accelerated on the 616 Building to recover the schedule.

#### **DISPOSE WASTE – CAPITAL PROJECTS**

##### **Project W-464 - Immobilized High-Level Waste Interim Storage (Expense Funding)**

**Description and Cause:** The favorable schedule variance (\$0.0M; 2.6%) is within the reporting threshold.

**Impact:** No impact.

**Corrective Action:** None required.

##### **Project W-520 - Immobilized Low-Activity Waste Disposal (Expense Funding)**

**Description and Cause:** The unfavorable schedule variance (-\$0.0M; -7.5%) is the result of the delay in initiating the Operations and Maintenance Plan and other project support workscope due to higher priority work.

**Impact:** The scheduled activities will be recovered by fiscal year end.

**Corrective Action:** The Operations and Maintenance Plan will be completed this fiscal year.

#### **COST VARIANCE**

##### **DISPOSE WASTE – EXPENSE**

**Description and Cause:** The favorable cost variance (\$0.3M; 9.3%) is within the reporting threshold.

**Impact:** No impact.

**Corrective Action:** None required.

#### **DISPOSE WASTE – CAPITAL PROJECTS**

##### **Project W-464 - Immobilized High-Level Waste Interim Storage (Expense Funding)**

**Description and Cause:** The favorable cost variance (\$0.3M; 36.1%) is within the reporting threshold.

**Impact:** No impact.

**Corrective Action:** None required.

##### **Project W-520 - Immobilized Low-Activity Waste Disposal (Expense Funding)**

**Description and Cause:** The favorable cost variance (\$0.3M; 66.3%) is within the reporting threshold.

**Impact:** No impact.

**Corrective Action:** None required.

## TW10 MANAGE PROJECT

### PERFORMANCE SUMMARY

| Cumulative Performance – Manage Project |             |             |             |           |           |            |
|---|-------------|-------------|-------------|-----------|-----------|------------|
|   | <u>BCWS</u> | <u>BCWP</u> | <u>ACWP</u> | <u>SV</u> | <u>CV</u> | <u>EAC</u> |
| HANDI                                   | \$58,603    | \$57,059    | \$53,260    | -2.6%     | 6.7%      |            |
| Pending Baseline                        | \$36,635    | \$36,831    | \$26,520    | 0.5%      | 28.0%     | \$122,273  |

### SCHEDULE VARIANCE

**Description and Cause:** The unfavorable schedule variance (-\$1.5M; -2.6%) is within the reporting threshold.

**Impact:** No impact.

**Corrective Action:** None required.

### COST VARIANCE

**Description and Cause:** The favorable cost variance (\$3.8M; 6.7%) is within the reporting threshold.

**Impact:** No impact.

**Corrective Action:** None required.

## TW11 CLOSE FACILITIES

### PERFORMANCE SUMMARY

| Cumulative Performance – Close Facilities |             |             |             |           |           |            |
|---|-------------|-------------|-------------|-----------|-----------|------------|
|   | <u>BCWS</u> | <u>BCWP</u> | <u>ACWP</u> | <u>SV</u> | <u>CV</u> | <u>EAC</u> |
| HANDI                                     | \$8,144     | \$2,957     | \$4,787     | -63.7%    | -61.9%    |            |
| Pending Baseline                          | \$12,977    | \$7,937     | \$4,773     | -38.8%    | 39.9%     | \$23,323   |

### SCHEDULE VARIANCE

**Description and Cause:** The unfavorable schedule variance (-\$5.2M; -63.7%) is the result of delays due to extensive negotiations with Ecology over the location of the six *Resource Conservation and Recovery Act of 1976* (RCRA) monitoring wells.

Written approval from Ecology for the location of T, TX, and TY boreholes was delayed, and direction to conduct direct push sampling has not been received from ORP.

The 244-CR vault stabilization activities were put on hold pending CHG management review.

**Impact:** No RCRA drilling fieldwork will be performed this fiscal year. Borehole drilling for T, TX, and TY will continue behind schedule, while the direct push sampling will not be implemented this fiscal year. Schedule variance for the 244-CR vault stabilization will continue until a path forward is determined and implemented.

**Corrective Action:** RCRA drilling workscope will be addressed as part of the BIP.

A recovery plan has been developed to complete the T, TX, and TY boreholes by the end of FY 2002.

A path forward will be developed and implemented for the 244-CR vault stabilization as part of the BIP.

### **COST VARIANCE**

**Description and Cause:** The unfavorable cost variance (-\$1.8M; -61.9%) is a result of unplanned costs incurred on W-23-19 Groundwater Well Remediation and Tank Farm Gamma Logging support, which were authorized to proceed by ORP direction. In addition, costs for laboratory support were higher than planned due to workscope that was planned for FY 2001 and completed in FY 2002 and the associated costs incurred with this workscope.

**Impact:** The variance will continue until implementation of the BCR for the work directed by the OD; laboratory costs are forecast to overrun at yearend.

**Corrective Action:** The baseline will be adjusted to reflect the approval of the OD work as part of the BIP. CHG has directed the laboratory contractor to explore cost cutting alternatives.

## **PED PROJECT ENGINEERING AND DESIGN**

### **PERFORMANCE SUMMARY**

|          | Cumulative Performance – Dispose Waste |             |             |           |           |            |
|----------|--|-------------|-------------|-----------|-----------|------------|
|          | <u>BCWS</u>                            | <u>BCWP</u> | <u>ACWP</u> | <u>SV</u> | <u>CV</u> | <u>EAC</u> |
| HANDI    | \$1,750                                | \$1,767     | \$894       | 0.9%      | 49.4%     |            |
| Pending  |  |             |             |           |           |            |
| Baseline | \$1,765                                | \$1,843     | \$894       | 4.4%      | 51.5%     | \$2,824    |

### **SCHEDULE VARIANCE**

### **PROJECT ENGINEERING AND DESIGN – CAPITAL PROJECTS**

**Project W-464 - Immobilized High-Level Waste Interim Storage  
(Line Item Funding)**

**Description and Cause:** The favorable schedule variance (\$0.0M; 0.9%) is within the reporting threshold.

**Impact:** No impact.

**Corrective Action:** None required.

## **COST VARIANCE**

### **PROJECT ENGINEERING AND DESIGN – CAPITAL PROJECTS**

#### **Project W-464 - Immobilized High-Level Waste Interim Storage (Line Item Funding)**

**Description and Cause:** The favorable cost variance (\$0.9M; 49.4%) is within the reporting threshold.

**Impact:** No impact.

**Corrective Action:** None required.